

AUTUMN 2001

# Harvard Medical

ALUMNI BULLETIN

## Inspiring Minds

Neurosurgeon Benjamin Carson  
celebrates the power of  
perseverance in medicine



#### LUMINARY

Hans Zinsser (1878–1940), an HMS professor who helped lead in the fight against typhus, wrote in his 1935 book *Rats, Lice and History*, "Infectious disease is one of the few genuine adventures left in the world."



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## In This Issue

**F**OLLOWING DECADES OF TRADITION AND THE DICTATES OF OUR quarterly publication schedule, this issue of the *Bulletin* recounts the thoughts and emotions of Class and Alumni Days, 2001. As a rule, such a lapse of time does little to stale our contents. The sentiments at these annual events tend toward the enduring, the verities toward the decidedly eternal. Speakers express their vision of the future, but with a focal length extending well beyond the end of the year. This fall, of course, has felt much different. None of those who spoke last June could have anticipated quite how the world would seem when their words appeared in print.

Our previous issue, with its special report on HMS in the Second World War, might seem closer than this one to the mood engendered by the terrorist attacks. But that issue was planned much earlier. At the time we could not and did not intend any comparison between September 11, 2001, and December 7, 1941. But comparisons there must be. As I write, medicine is again moving to the front line and the front pages in a new sort of warfare, which threatens to permeate our lives for years to come. After a devastating few days in which physicians had little to offer because there were so few victims left wounded by the destruction of the New York towers, public health and medical science have become the second front of this new war as anthrax is being disseminated through the mails.

Future issues of this publication must in their modest way begin to take account of the new world disorder that the recent events portend. The international reality is that a fellow physician is one of the most important leaders of al Qaeda, and another has for years been deeply implicated in the atrocities committed in the former Yugoslavia. Is this coincidence? Is it paradox? Or does it say something about the way medicine as a force for modernization will become entangled in the worldwide struggle to contain or reverse the forces of modernity?

This issue, then, is a glimpse of the past, of a couple of warm spring days when the world seemed quite a bit safer and the task of medicine could be outlined in largely positive ways. Nothing that has happened since last June should be allowed to undo the remembered warmth or the optimism of those days. But our annual celebration of medicine and physicians as a benign and progressive social force may for some years become a more complicated and sadder event, as we seek to find our way through the social and cultural minefields that, with the best of intentions, we all have entered.

*William Ira Bennett*

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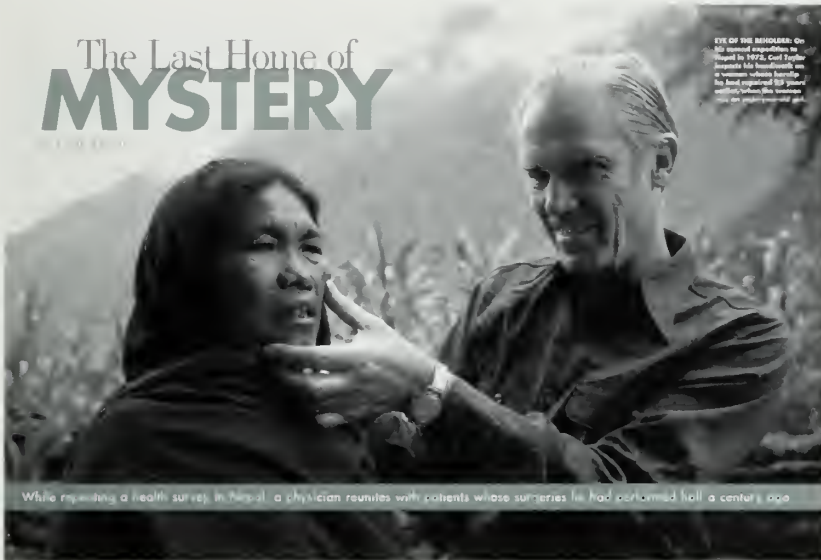
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## The Last Home of MYSTERY



### Paradise Lost

The spring issue of the *Bulletin* on "Unsung Heroes" was very interesting—and practical, as it pointed to avenues of service for retired physicians such as myself.

In the same issue, the account that Carl Taylor '41 wrote about his visits to Nepal ("The Last Home of Mystery") brought back many memories. The leader of the 1949 expedition he describes—Robert "Hullu" Fleming, Sr.—taught us biology at Woodstock School, which was run by the American Board of Missions in the Himalayas just west of Nepal. Of course, we were regaled with the adven-

tures of the expedition. Carl Taylor was already a legend in India.

For years, we collected specimens of plants, insects, and birds for Robert to send to the Field Museum of Natural History in Chicago. He also encouraged us to hike into the back ranges of the Himalayas to collect specimens and to experience the thrill of adventure. The crown prince of Nepal and some of his siblings had started attending Woodstock, and I believe this was the lever that opened the door to that country.

A year or two later, Robert's wife, Bethel, who was the school doctor, joined him on a second expedition. She

started a hospital in Katmandu. When the Flemings went on sabbatical, the hospital was run by many volunteers, including my mother, Dorothy. Over the years I have met several doctors who have gone to that hospital, such as Raymond Stannard and Gordon Mack. It would be interesting to know whether the hospital is still functioning.

The opening of Nepal was inevitable, and from Dr. Taylor's account, probably a mixed blessing. In view of the recent tragedy involving the Nepalese royal family, one has to wonder whether some of them were the students who attended Woodstock more than 50 years ago.

JOHN CHACKO '60

KAMLOOPS, BRITISH COLUMBIA

### Start Kidding Yourself

I have been a practicing pediatrician for more than 16 years. As I was listening to the Alumni Day speeches on physician renewal, I thought about an 18-month-old girl I had seen recently. This exuberant toddler had scampered around my office, filling it with the sheer joy of being. She suffers from chronic renal failure and had at one point even been "dead" for more than 40 minutes. But in my office she was charged with an energy that allowed her to overcome her disabilities.

We all have that joy, still, within us, buried beneath research, journals, fatigue, responsibility, and worldly cares. Seek and connect with your inner child daily. If we run and skip, throw temper tantrums (at HMOs, for instance), and are just happy, allowing ourselves to wonder and play, then we shall be renewed. We can look to children to teach us this important lesson.

EARNEST WU '76

CHELMSFORD, MASSACHUSETTS

### Striking Gold

The *Bulletin* recently received nods of recognition for editing, writing, and design. *Folio: Magozine* awarded the *Bulletin* its Gold Medal for Editorial Excellence in the Healthcare/Medical category. The Association of American Medical Colleges presented an Award of Distinction to Beverly Bollero, associate editor, for her article "When HMS Went to War," which appeared in the Summer 2000 issue. And the *Bulletin* received an honorable mention from the Ozzie Awards for best use of black-and-white photography.

The *Bulletin* welcomes letters to the editor. Please send letters by mail (Harvard Medical Alumni Bulletin, 25 Shattuck Street, Boston, Massachusetts 02115); fax (617-384-8901); or email ([bulletin@hms.harvard.edu](mailto:bulletin@hms.harvard.edu)). Letters may be edited for length or clarity.



## The Class of 2005

After a welcome from the deans, the incoming Class of 2005 took part in the traditional White Coat ceremonies, which marked the beginning of their journeys as doctors.

The entering class consists of 80 men and 84 women. The number of minority entering students remains strong, with seven Asians and Pacific Islanders, 27 African Americans, four Mexican Americans, one Native American, and two Puerto Ricans. The youngest entering medical student is 21 years old, the oldest is 32, and the median age is 23.

Thirty-three U.S. states are represented in the class. California leads with 28 students. Massachusetts is next, with 22, followed by New York with 18, and New Jersey with nine. There are five international students, including one each from Canada, Germany, Greece, Italy, and Slovakia.

About 23 percent of the class (37 students) graduated from Harvard College. The next highest numbers come from Yale (ten students), Princeton (nine students), Stanford (eight students), and MIT (seven students). Science majors make up 68 percent of the class, while 13 percent majored in humanities and 5 percent in social sciences. Nine percent graduated with double majors. ■



**GETTING A MED START:** First-year students Kedar Mate, Hans Ackerman, and Jacinda Mawson attend the White Coat ceremony of the Cannon Society.

## The State of the School

**B**UILDING BRIDGES" WAS THE theme of HMS Dean Joseph Martin's fourth annual State of the School address, which he delivered to the HMS community in late September. Illustrating his talk with images of the many steel and concrete bridges around the Longwood medical area, the dean gave a progress report on the equally abundant institutional bridges connecting the School's components and reaching out to affiliated hospitals, other Harvard schools, and partners in the neighborhood, the city, and around the world.

### Building Bridges

Martin's aim, he said, was "to show that the spirit of cooperation and collaboration is continuing, to provide evidence of progress, and to mark honestly areas of concern where further work is needed."

Martin opened by displaying an aerial shot of Boston's new signature landmark, the Leonard P. Zakim Bunker Hill Bridge over the Charles River, and lauded Zakim's work in interfaith relations as well as his lesser-known advocacy for terminally ill patients at the Dana-Farber Cancer Institute.

The most visible evidence of Martin's collaborative drive is the new research building that will anchor the North Quad across Longwood Avenue to the original 1906 Quad. One of the largest projects ever undertaken at Harvard University, the building is on schedule, below budget, and slated to open in the fall of 2003.

"The remarkable thing from my perspective is how flawless the planning has been in determining who will use the new building and what we will do to grow other programs throughout the Quad," Martin said. The Departments of Genetics and Pathology will move to the new building, which will also house the newly created Harvard Partners

Program in Genomics and several basic research programs of Brigham and Women's Hospital and Beth Israel Deaconess Medical Center. At the same time, the department chairs have identified five priority research areas to be expanded in the South Quad space freed up by the move: systems biology; computational biology; parasitology; imaging; and structural biology.

### Expanding Research

Martin highlighted several items of note on the research front. Five core programs and their leaders have been determined for the Harvard Center for Neurodegeneration and Repair: Centers for Translational Neurology Research, Brain Imaging, Molecular Pathology, and Computational Analysis, as well as a robotics facility. The Harvard Institute of Proteomics is working to establish a gene expression repository for all human and model organism genes and to make these publicly available through the FLEXGene consortium. The Dana-Farber/Harvard Cancer Center has two Specialized Programs of Research Excellence (SPORes) funded by the National Cancer Institute, in breast and skin cancers. And a new Division of AIDS is being formed with faculty from all the major affiliates and in collaboration with the Harvard School of Public Health and the Harvard School of Dental Medicine.

### Teaching Medicine

Turning to medical education, Martin announced several appointments: George Thibault '69 was named director of the fledgling Academy at Harvard Medical School, heading up a group of 18 founding members. And two new society masters were named: Gordon "Buck" Strewler '71 for the Cannon Society and Augustus White III for the Holmes Society.

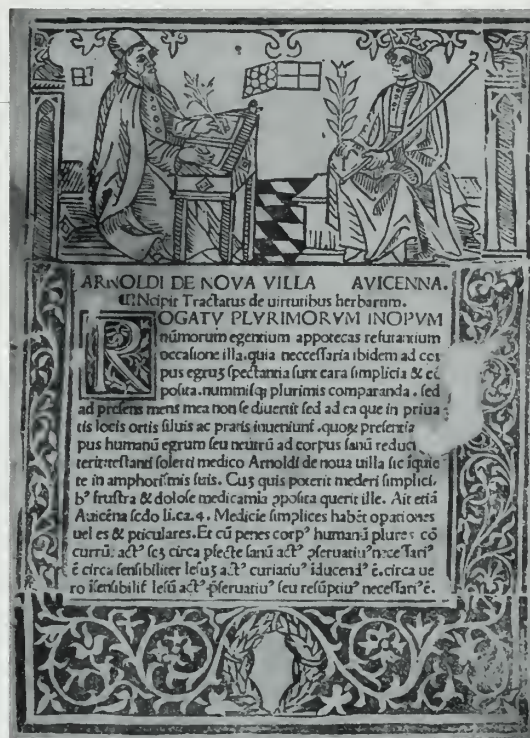
## A New Exhibit of the Very Old

The Francis A. Cauntway Library of Medicine has embarked on an ambitious project to describe and catalog fully its holdings of incunabula, which are the very first examples of books, pamphlets, and broadsides printed with moveable type in Western Europe. The library is also making online descriptions of these items available to scholars and researchers for the first time. To commemorate these efforts, the library is hosting an exhibit on incunobulo, which are also sometimes referred to as "fifteeners" from their appearance in the fifteenth century.

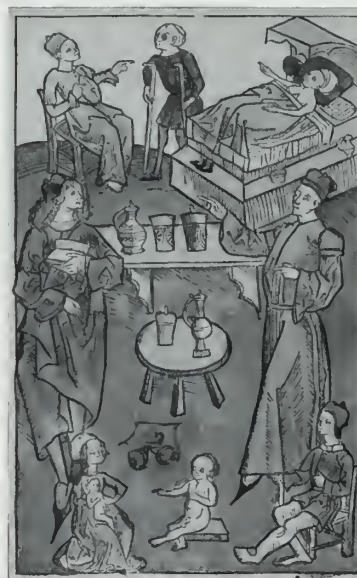
The Cauntway Library, with more than 800 items, holds the largest collection of medical incunabula in the country and one of the finest collections of its kind in the world. The famous names and rare editions of the great early works in medicine are all well-represented. Books on virtually every facet of medical knowledge are included, along with works on pharmacy, botany, natural history, witchcraft, alchemy, astrology, poetry, and philosophy.

The Fifteeners exhibit offers a glimpse of these forest of printed medical works. Some of the more unusual items on display are Thucydides' description of the fifth-century plague at Athens, the first German edition of the lavishly illustrated *Nuremberg Chronicle*, a 1494 almanac predicting solar and lunar eclipses, the first full-length illustration of a muscle dissection, the first printing of a medical treatise in Hebrew, and the first Latin edition of the Hippocratic Oath.

The exhibit will be on display through April 1, 2002. For more information, visit [www.cauntway.harvard.edu/rarebooks/fifteeners/index.html](http://www.cauntway.harvard.edu/rarebooks/fifteeners/index.html), or contact Jack Eckert at 617-432-6207 or [jack\\_eckert@hms.harvard.edu](mailto:jack_eckert@hms.harvard.edu). ■



**MOVEABLE FEAST:** The Cauntway Library exhibit on medical incunabula includes many rare and beautiful examples of the first printed matter. Pictured above is a woodcut from a book on the medicinal uses of common herbs; to the right is an illustration from a popular compendium of plant and herb lore.



Martin displayed the front page of the MyCourses website for students and faculty and credited John Halamka, the new associate dean of educational technology, for his efforts in creating the site. Martin then referred to the new Student Affairs Office on the third floor of the Gordon Hall of Medicine, explaining that "the idea here is to encourage students to be more aware of and available to us in that remote site of the Quad."

The dean went on to recognize the efforts of Harvard Medical International in building global bridges. A milestone for Harvard Medical International this year, he said, was the Health Care East and West Conference in June, which brought 600 physicians from China, "the largest single group of people to leave the mainland in the last 50 years, except for the Olympics." He added that the event represented a historic first step to building a bridge of dialogue between

physicians in the United States and their counterparts in China.

After calling for a moment of silence for the victims of the September 11 terrorist attacks, Martin announced that an open forum for the HMS community would be held on the one-month anniversary of the tragedy. He closed by reminding the audience of the HMS mission: to create and nurture a community of the best people committed to leadership in alleviating human suffering caused by disease. ■



## The Medical Curriculum Goes Digital



**PORTAL TO THE FUTURE:** Griffin Weber (left) and John Halamka led students and faculty in taking the medical curriculum to the next level.

**H**ARVARD MEDICAL SCHOOL AND the Harvard School of Dental Medicine have launched the newest version of their online curriculum, one that provides electronic access to the complete course material for all four years. The eCurriculum, as it is known, is the brainchild of John Halamka, HMS associate dean of educational technology, who, together with a team of programmers and educators, worked for eight months to ensure that the transition from pen and paper to keyboard and screen would be completed by the start of the fall semester.

Students gain access to the eCurriculum through the aptly named web portal MyCourses. "Our goal was to provide a single destination for all electronic resources students would need," Halamka says. The portal lives up to expectations. A few mouse clicks can take students to handouts, casebooks, histology slides,

and, via streaming video and endoscopy, deep into the human body itself.

From the student's perspective, the beauty of the system is its very simplicity. Everything is available from any computer, anywhere, anytime. Because the School knows which courses students have elected, each portal comes with a tailor-made calendar; if a student wants to find out what she will be doing in mid-February, for example, it's all there, just a click away.

Student input was, of course, crucial to the project. As luck would have it, while Halamka and the faculty were brainstorming about the eCurriculum last winter, Griffin Weber, a first year student, was independently working on his own website for classmates in Health Sciences and Technology, building some of the features that would eventually be used for the MyCourses portal. When Halamka saw what Weber had done, he

immediately recognized that it was exactly what he wanted. Soon the two projects merged.

Professors, too, have a MyCourses portal, but theirs comes with editing privileges. They can upload course content and post announcements—all from home, if they wish. Faculty members have three main utilities: CourseEditor, which allows the content of an entire course to be uploaded in advance; Case-Builder, which enables faculty to post scenarios based on encounters with real patients; and the ResourceBank, a repository for teaching aids that can be used for any HMS course.

Halamka was not satisfied with traditional portals, so he made everything mobile. With the help of ArcStream Solutions, Inc., MyCourses web content can now be transferred to personal digital assistants, so students and faculty can have their calendars and announcements in their pockets, right where they need them. This will be especially useful to third- and fourth years, who are often off campus and may not have computer access. In addition, the second floor of the Tosteson Medical Education Center, which houses the student societies, is now equipped with infrared data-transfer capability, allowing students to synchronize their PalmPilots with the touch of a button.

The handheld devices also offer their own suite of utilities, some particularly suited to clinical settings. These include drug and toxicology databases, such as ePocrates and Micromedex, which can help doctors make treatment decisions on-site, and PatientKeeper, which allows students to record patient information on their rounds and consult their data later if the need arises. Of course, security is a major concern, so Halamka's team has gone to great lengths to ensure that access is limited and patient confidentiality remains uncompromised. ■



## Once and Future Provosts

**B**OTH THE IMMEDIATE PAST AND future provosts of Harvard University are graduates of Harvard Medical School.

Harvey V. Fineberg '71, who resigned as provost last summer, will become the seventh president of the Institute of Medicine (IOM) in July 2002. Fineberg was dean of the Harvard School of Public Health for 13 years before serving as Harvard provost from 1997 to June 2001.

The 1,429-member Institute of Medicine was chartered by the National Academy of Sciences to enlist distinguished members of the health professions in examining health policy matters. IOM advises the government on issues such as vaccine safety, health-care delivery and quality, nutrition standards, cancer prevention and management, and military and veterans' health.

Kenneth Shine '61, the current president of the Institute of Medicine, noted, "Harvey Fineberg combines a rich academic leadership experience with a continuing commitment to and involvement in the health of the public. He is an outstanding choice."

"To meet the public's health needs and to fulfill the promise of science for health have never been more compelling social goals," Fineberg said. "Thanks to the work of Ken Shine and many others, the Institute of Medicine is better prepared than ever to accomplish these objectives. It is a privilege to be named as president-designate of the IOM, and I relish the opportunity to lead this vital and dynamic institution."

Helping to lead another dynamic institution will be Steven Hyman '80, director of the National Institute of

Mental Health, who becomes the University's new provost in December 2001.

As provost, Hyman will be responsible for academic planning and policy matters of high priority to the University, with an emphasis on activities that extend across several Harvard faculties or other wise involve collaboration and change.

Hyman is no stranger to Harvard. He spent 20 years at HMS, as both a student and a professor of psychiatry. He served as deputy director of psychiatry research at Massachusetts General Hospital from 1992 to 1996, director of the Division on Addictions at HMS from 1992 to 1995, and the first faculty director of the University's interfaculty Mind/Brain/Behavior initiative from 1994 to 1996.

In 1996, Hyman took over as director of the National Institute of Mental Health, where he intensified efforts to bring together molecular biology, genetics, neuroscience, and behavioral science in an integrated way to better understand mental illness and mental health.

Hyman has focused his own research on mechanisms of neural plasticity in the brain.

His principal interest has been on how dopamine and glutamate produce long term changes in brain function by altering gene expression in the striatum and nucleus accumbens, regions involved in the control of motivated behavior and implicated in the action of both antipsychotic medications and drugs of abuse.

"I am very excited to be returning to Harvard," Hyman said, "and to have the opportunity to address important issues ranging from new ways of crossing disciplinary bounds to thinking about science education for undergraduates." ■



**CRIMSON TIDE:** Two HMS alumni—the outgoing Harvey Fineberg (left) and the incoming Steven Hyman—will have served as Harvard provosts.

## THE SCHOTT LETTER

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*Forbes, February 1996*

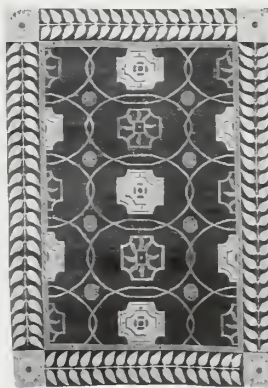
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## Division of AIDS Created to Speed Research

**H**MS RESEARCHERS HAVE MADE some of the most important advances against HIV and AIDS in the 20 years since the epidemic began. But until now, they have not had a common institutional base within the School. The new HMS Division of AIDS will provide that home and will enhance coordination, spur collaboration, and open up new avenues for research funding, its leaders say.

"Harvard Medical School has made tremendous contributions to dealing

with the HIV epidemic, but we all believe we can do much better still," says Bruce Walker, HMS professor of medicine at Massachusetts General Hospital and the division's first director. "The Division of AIDS is a way to help coordinate an accelerated effort to address this global health crisis."

All investigators at the School and affiliated institutions who receive funding for HIV-related basic or clinical research—from the National Institutes of Health (NIH) or other peer-reviewed sources—will be considered



**UNDER A BIG TENT:** Bruce Walker directs the new HMS Division of AIDS, which brings HIV researchers from the School and affiliated institutions together under one umbrella.

## The HMS Record Against AIDS

HIV/AIDS RESEARCHERS AT HARVARD MEDICAL SCHOOL:

- Demonstrated a marked decrease in CD4<sup>+</sup> T cells in AIDS patients, establishing a basis for the impairment of the immune system in the disease;
- Made the first clinical description of an AIDS-like illness in monkeys and demonstrated viral transmission in monkeys;
- First isolated HIV from semen, providing critical support for the theory that HIV is sexually transmitted;
- First demonstrated in vitro that combination antiretroviral therapy is more effective than single-drug therapy in reducing HIV replication;
- Created the first animal model to study how HIV damages the fetal immune system and how prenatal and perinatal transmission can be prevented;
- Established the critical role of HIV-1-specific T helper cells in protecting against disease progression;
- Obtained the crystal structure of the HIV-1 gp120 envelope protein, resulting in three-dimensional pictures that reveal how HIV-1 attaches to white blood cells and evades the host immune system;
- Demonstrated that early treatment of acute HIV infection augments immune function and allows for spontaneous immune control of the virus after treatment cessation in some patients;
- Performed the first effective vaccination in monkeys against a strong virus challenge, giving insight into protective immune responses; and
- Established the cost-effectiveness of highly active antiretroviral therapy (HAART).

division members. This group currently numbers 165 faculty with \$75 million annually in sponsored research funding. The division will combine two existing NIH-funded Centers for AIDS Research already based at HMS and its affiliates into one large unit. The AIDS Clinical Trials Unit and the HIV Vaccine Clinical Trials Unit will also become part of the division.

To preserve the collaborative spirit that guided the division's creation, leadership will rotate among the participating institutions every two years. When Walker's term is up in 2003, associate director Joseph Sodroski, HMS professor of pathology at the Dana-Farber Cancer Institute, is slated to succeed him as director.

Raphael Dolin '67, HMS dean for clinical programs, helped to establish the division and serves as the dean's office liaison to the group. He says that until now, many AIDS researchers at HMS "were collaborating at a considerable distance, when they had equal or greater opportunities within the Harvard medical community. This is a way to bring them together."

Walker emphasizes what he calls the "stunning" list of advances the School's faculty have made against HIV. For example, "The key immune responses that are thought to be important for vaccine development



were all discovered at Harvard Medical School—neutralizing antibodies, cytotoxic T cells, and T helper cells and their role in AIDS pathogenesis,” he says. “What we’re trying to do now as a division is to build on these and many other advances.”

Walker’s own research has shown that treating patients very early in the acute phase of HIV infection can change the way their immune system sees the virus, induce strong helper T cell responses and, in some cases, get patients off medicine and allow them to control the virus on their own.

Particularly crucial to advancing current treatments, Walker says, will be the division’s ability to bring basic and clinical scientists into close working relationships. “Because we’re seeing clinical manifestations of the disease,” he says, “we’re able to think about the important biological questions in a different way than someone who is working in basic science totally divorced from the clinical front.”

The division will foster interinstitutional collaboration in education and outreach as well as research, Dolin says. It is meant to complement the Harvard AIDS Institute, which is based at the Harvard School of Public Health. Collaborations with the institute are already planned.

A fundraising component to the division is also anticipated. “There are a lot of people interested in contributing to the fight against AIDS, and we think the opportunity to contribute to the entire Harvard program will be attractive to potential donors,” Dolin says.

A major goal will be to raise the resources needed to build “the best HIV research center in Africa,” in one of the areas hardest hit by the epidemic, Walker says. The center is envisioned as a training ground for Africans who aspire to become AIDS researchers and as a platform for studies of antiviral therapy in resource-poor settings. ■

*Tom Reynolds is a writer in the dean’s office at Harvard Medical School.*

## Academy Takes Flight



**HEAD OF THE CLASS:** George Thibault now leads an effort to promote and reward good teaching at HMS.

GEORGE THIBAUT ’69 HAS BEEN NAMED THE FIRST director of the Academy at Harvard Medical School, a program that began last February under the leadership of Daniel Lowenstein ’83, dean for medical education.

Thibault, a professor of medicine at Brigham and Women’s Hospital, has long been involved in medical education. Among his other contributions, he has served as a medicine clerkship and residency program director at Massachusetts General Hospital, as chair of several New Pathway curriculum design committees and of the HMS Committee on Years III and IV, and as a founding member of the Academy.

“We want to champion the teaching role of faculty,” Thibault says. “We want to help faculty become better teachers, and we want to innovate, because medicine has changed and we should be thinking about different ways to educate our students for this changing world.”

The Academy’s success will be measured by increases in the promotion of teaching faculty, the quality of the student experience, and the amount of funding raised to support education. “Our aim is to bring in new resources that have been specifically devoted to paying for teaching time and educational programs,” Thibault says. ■



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## A Question of Intent

*A Great American Battle with a Deadly Industry*  
by David Kessler '77 (*Public Affairs*, 2001)

**A**LL OF US HAVE A MEMOIR IN US, BUT NOT ALL OF US have an audience (and, sadly, too few of us realize this). The best kind of memoir is by a hero in a war where sides are easy to take. *A Question of Intent*, by David Kessler '77, former commissioner of the Food and Drug Administration, is more than 450 pages long—always a sign of authorial self-confidence—and the writer seems to view himself as a hero on a quest. And so he should, for this is not a nostalgic tale of small-town youth. It's the story of the fight to kill the tobacco industry.

Kessler went to the FDA in 1990 from HMS (which, humbly, receives only one mention in his book) and law school. He was 39 years old and suddenly responsible for an 8,000-person agency with a \$600 million budget. There were prominent fires to douse—product tampering and the fight for nutritional labeling alone could have absorbed a career.

Then, in 1991, a staffer suggested that the FDA “take on tobacco.” It seemed ridiculous. But over the next year, the idea of taking on tobacco was reshaped: instead of regulating cigarettes, the FDA would propose to regulate nicotine as an unsafe drug under the 1938 Food, Drug, and Cosmetic Act. This had never been done before. It meant proving that the tobacco industry was intentionally manipulating the content of cigarettes in order to create addiction. It also meant—not to put too purple a point on it—shaking a finger at evil.

The book takes off. The FDA meets its first whistleblower, a former R. J. Reynolds employee named “Deep Cough.” He is the first of many—Veritas, Critical, Saint, Research, Cigarette, Jr.—whose names are winsome but whose stories are shocking. No surprise that one tobacco lawyer admits that this will be his last job—the position pays handsomely because it taints him permanently.

Kessler pulls together a “Mission Impossible” team to prepare for his first congressional hearing. Within a month, they must learn all there is to know and fear about tobacco, nicotine, and addiction. They need to understand everything that has been kept secret for decades. Their sprawling infiltration of the industry—from secret meetings in seedy diners, to South American junkets, to glimpses into the roped-off rooms of cigarette factories—is a thrilling read.

Kessler the lawyer convinces Kessler the physician to attack the industry on its own attractive philosophical premise. For

years, ads have intimated the pleasures of choosing to smoke. But smokers can no longer choose whether to smoke. In front of network cameras, Kessler presents harrowing statistics to Congress, the kind a nonscientific mind can grasp clearly enough to recoil from. The smoker has no free will: 17 million smokers try to quit annually, but more than 90 percent fail; after lung surgery, 50 percent of survivors begin to smoke again; 90 percent of addicted smokers begin in adolescence. Smoking, the commissioner argues, is, in fact, “a pediatric disease” with consequences throughout adulthood.

It's a clever—and correct—strategy. In 1996, President Clinton announces a rule allowing the FDA to restrict tobacco on both its supply side (no vending machines for children) and its demand side (no color advertising appeal or corporate sports sponsorships). A coup! Predictions that childhood use of tobacco will be cut by half! Photo ops! Nightly news coverage!

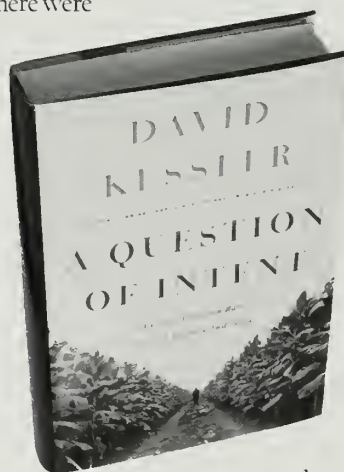
Then the dark smoking horses rally with a series of legal challenges that bring them before the Supreme

Court. In 1999, the conservative court rules five to four against the FDA. It is done quietly, decisively, and devastatingly. The FDA's authority is suspended before it can begin.

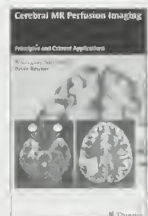
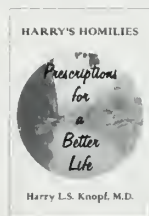
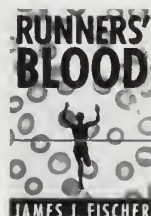
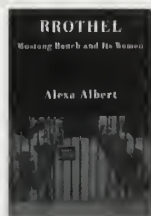
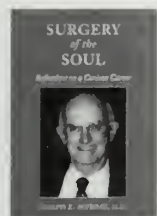
That is the simple end of the story. Our hero does not triumph. In fact, he leaves government. But he still reviews documents in his garage late at night (when he isn't acting as dean of Yale University School of Medicine by day), and this has led him to some striking conclusions. Nicotine, he argues, must remain available because so many Americans are addicted to it. But the nicotine industry must be “dismantled”—tobacco companies have to be bought out by government, and then overseen without profit. These are counterintuitive and enormous thoughts. They must be well-attended.

At times, you wish for a moment of human doubt in a book full of the self-confidence of a genuine hero. On the other hand, we should all feel as proud of our day jobs. When Kessler the Doctor, Lawyer, Commissioner, and Med School Dean becomes Kessler the Writer, he occasionally labors under the shadow of Raymond Chandler (“it was his privilege to take the tobacco money; it was my privilege to think poorly of it”). But forgive it. He is enjoying himself, and, after all he has accomplished, he should. You can almost see him at his desk late at night, a neon sign flashing outside the hotel window behind him, typing with two fingers on the manual. His felt hat is pushed back on his crown, his tie knot hanging below the collar, his chin covered with midnight shadow. He has a story to tell about an attempt to right history. He will be writing it into the dawn. Only the dangling cigarette is missing. ■

*Elissa Ely '88 is a lecturer on psychiatry at HMS.*







## Surgery of the Soul

*Reflections on a Curious Career,*  
by Joseph E. Murray '43B  
(Science History Publications, 2001)

In this autobiography, Murray describes his role in breakthrough research in human organ transplantation and his pioneering advances in surgical techniques to correct deformities of the head and face. A Nobel Prize winner, Murray is one of the twentieth century's most honored surgeons. His autobiography tells not only his own story, but also the stories of many of his patients. While revealing the curiosity, tenacity, optimism, and humanity of a remarkable surgeon and scientist, this book demonstrates the transforming effect of Murray's care and skill in restoring not just bodies, but souls as well.

## Brothel

*Mustang Ranch and Its Women,*  
by Alexa Albert '98  
(Random House, 2001)

As a medical student, Albert gained access to Mustang Ranch, a legal brothel in Nevada, to carry out a study on condom use. She found herself unexpectedly drawn into the lives of the women she befriended there. The brothel workers shared their stories with her: how they came to be at Mustang Ranch, how they had developed a deep sense of craft and vocation, how they struggled to reconcile their profession with the rest of their lives. Albert's account of the brothel and its women

dispels myths and provides an intimate glimpse into a largely hidden world.

## Runners' Blood

by James J. Fischer '61  
(Word Association Publishers, 2000)

An avid runner himself, Fischer has written a medical mystery about cheating in sports. When the protagonist, distance runner Sean Rourke, is beaten in a road race by a middle-aged man, a series of events are set in motion that involve the theft of a scientific discovery, international intrigue, and murder.

## Seeds for All Seasons

by Alan B. Gazzaniga '61  
(Vantage Press, 2001)

The author's first novel is a thriller about a Harvard neurosurgery student in the 1960s, a time when it was not uncommon for doctors-in-training to turn to sperm donation as a way to supplement their meager paychecks. The novel explores the tragic consequences of an unregulated practice.

## Harry's Homilies

*Prescriptions for a Better Life,*  
by Harry L.S. Knopf '67 (1stBooks, 2001)

This slim volume is a collection of the sayings, wisecracks, and personal philosophies that appeared in Knopf's monthly column in *St. Louis Metropolitan Medicine*, the journal of the St. Louis Metropolitan

Medical Society. The homilies address problems that may be most appreciated by physicians, but the underlying messages are applicable to people in all professions and life situations.

## Spectacular Happiness

by Peter D. Kramer '76 (Scribner, 2001)

The first novel by the author of *Listening to Prozac* tells the story of Chip Samuels, a community college teacher who lives by the radical ideals introduced to him by his wife, Anais, in the 1960s. But Anais has run off with their son in search of a more conventional life. Written in the form of a letter from Chip to his estranged son, the novel opens as Chip is named as the chief suspect in a series of anarchist bombings of luxury beachfront homes.

## Cerebral MR Perfusion Imaging

*Principles and Current Applications,*  
by A. Gregory Sorensen '89  
and Peter Reimer (Thieme, 2000)

This book discusses the basic principles of perfusion MR imaging as well as present clinical applications in the assessment of cerebrovascular diseases and intracranial tumors. The authors address relevant technical aspects, describe contrast agents, provide imaging protocols, and describe the post-processing of images. Included is a CD-ROM containing all of the images from the book and additional movie clips for further analysis.

## Common Aspirin Reveals a Mechanism of Insulin Resistance

**V**ERY HIGH, STOMACH CHURNING doses of aspirin can reverse two major symptoms of type 2 diabetes by an unlikely mechanism. Researchers at the Joslin Diabetes Center have harnessed aspirin's dramatic ability to lower blood sugar and insulin levels to reveal a new protein culprit that can cause insulin resistance. Even better, quashing the molecule increased sensitivity to insulin in cells and in obese animal models.

The findings, published in the August 31 issue of *Science*, suggest a new molecular target to treat insulin resistance and type 2 diabetes. The disease affects more than 15 million Americans and many more people worldwide. It is believed to begin with insulin resistance, which is

made worse by obesity, a sedentary lifestyle, and poor diet.

"This new, provocative hypothesis will consume diabetes researchers' interest for some time to come and might well lead to important and novel therapeutic approaches to the treatment of type 2 diabetes mellitus," writes Morris Birnbaum, a Howard Hughes Medical Investigator at the University of Pennsylvania School of Medicine, in a perspective in the September 1 issue of the *Journal of Clinical Investigation*.

In people, the effect appears to be just as potent, reducing circulating levels of glucose, cholesterol, lipids, insulin, and accompanying clinical symptoms, according to preliminary results from a follow-up clinical trial of nine obese patients presented by Joslin researchers

at the American Diabetes Association meeting in June.

"It is the most commonly used drug in the history of mankind, and here it is with another intriguing effect," says Steven Shoelson, HMS associate professor of medicine at Joslin and senior author of the *Science* paper. Shoelson envisions the development of a new selective drug that can target the key protein without aspirin's potentially fatal side effects.

The painkiller is best known for its effects on the two cyclooxygenase enzymes (COX-1 and COX-2), but other researchers recently have shown that aspirin and its chemical cousin sodium salicylate also weakly but specifically inhibit the protein I-kappa-B kinase-beta (IKK-beta). The kinase is named for its role in the cascade of signals that activate the nuclear factor kappa B (NF-kappa-B) family of genes, which regulate inflammatory and immune responses. Now it turns out that IKK-beta also works in another pathway to contribute to insulin resistance by interfering with insulin signaling.

The distinction is in the dose. At 80 milligrams, a baby aspirin tickles COX-1 in blood platelets, discouraging them from sticking to vessel walls. At 650 milligrams, aspirin inhibits COX-1 and COX-2 in most tissues, calming inflammation, lowering fever, and reducing pain. At a whopping 5 to 8 grams a day—doses used to control rheumatic fever and rheumatoid arthritis—there is enough aspirin to inhibit IKK-beta. The problem is that aspirin, at these high doses, can cause dizziness, tinnitus, impaired hearing, nausea, vomiting, sweating, drowsiness, diarrhea, and headache. Other potentially life-threatening side effects include gastritis and gastric ulcers leading to gastrointestinal blood loss, as well as liver and kidney complications.

### Jamming the Signals

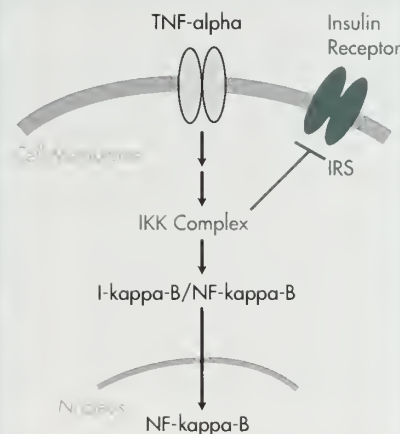
Shoelson's group had been working on molecular mechanisms for insulin resis-



**RESISTANCE MOVEMENT:** Steven Shoelson, Lone Hansen, Minsheng Yuan (from left), and others have found a potential new target for the treatment of diabetes.



## MIXED SIGNALS



Better known for its role in the NF-kappa-B pathway, a kinase in the IKK complex can also gum up the signaling pathway for insulin. Cross-talk between the two pathways can cause insulin resistance, according to a *Science* paper by Joslin Diabetes Center researchers. It turns out that a kinase in the IKK complex, IKK-beta, somehow discourages the tyrosine phosphorylation of insulin receptor substrates. This process interferes with the insulin signaling pathway necessary for the cell to store and use glucose and other nutrients from the blood. IKK-beta may be activated by TNF-alpha from fat cells or by other stimuli associated with insulin resistance and diabetes.

tance. They were particularly interested in the cross talk between the signaling pathways for insulin, beginning with the insulin receptors, and for TNF-alpha, a cytokine released by bloated fat cells, which appeared to promote insulin resistance. A 1998 paper in *Nature* caught their attention with the news that high doses of salicylates specifically target the IKK beta protein kinase in the TNF-alpha pathway.

"So we asked if high doses of salicylates had an impact on insulin resistance in animals," Shoelson says. "It was striking. High doses had a huge impact."

High doses of aspirin ameliorated the severe insulin resistance seen in the genetically obese rodents, Zucker fa/fa rats and ob/ob mice. A closer look at the liver and muscle tissue from treated animals and subsequent studies of cultured fat and liver cells exposed to TNF-alpha suggested that the fat-released cytokine activates IKK beta, which in turn gums up the insulin signaling pathway by diverting phosphorylation of the insulin receptor substrate necessary to carry the insulin signal deep into the cell. High doses of aspirin prevented that unhealthy molecular cross-talk between the pathways by inhibiting IKK-beta.

### Potential New Use for Old Drug

Further studies in genetically modified mice clinched the investigation. Homozygous *Ikk* beta<sup>-/-</sup> knockout mice don't live, so the researchers looked at heterozygous *Ikk* beta<sup>+/-</sup> mice having a 50 percent reduction in IKK beta. They found reduced fasting glucose and fasting insulin levels compared to littermates with both *Ikk* beta genes. The researchers unmasked a larger effect by feeding the mice a high fat diet and crossing both the partial knockout and

normal mice with ob/ob mice. Even the 50 percent reduction in the *Ikk* beta gene reduced fasting glucose and insulin concentrations and protected against insulin resistance. The results may explain why such weak inhibitors of IKK beta as aspirin and fellow salicylates have significant effects on glucose and lipid homeostasis, Shoelson says.

In a related study published in the August 1 issue of the *Journal of Clinical Investigation*, the Yale research laboratory of Gerald Shulman, in collaboration with Shoelson's group, found that high dose salicylate and reduction of IKK-beta in heterozygous *Ikk* beta<sup>+/-</sup> mice prevented insulin resistance in muscle tissue caused by an infusion of free fatty acids. Free fatty acids are known promoters of insulin resistance and are believed to activate PKC-theta, which in turn activates IKK beta.

In hindsight, Shoelson says, "We now recognize a striking overlap between stimuli that activate IKK beta and conditions that promote insulin resistance, including proinflammatory cytokines such as TNF-alpha, hyperglycemia, phorbol esters, PKC enzymes, serine/threonine phosphatase inhibitors, and bacterial lipopolysaccharide. These activators of IKK-beta cause insulin resistance in vivo or as experimental models in cultured cells."

Aspirin's pronounced impact on the symptoms of diabetes is not exactly new to medicine, Shoelson discovered when he searched the literature. In 1876, a German professor described the fast improvement and transient disappearance of symptoms in two men, ages 58 and 59, who were suffering from what doctors now recognize as classic type 2 diabetes. In the late 1950s, scattered reports resurfaced with equally dramatic results. Physicians and researchers likely were discouraged by the severe side effects of aspirin, stumped by the mechanism of action, and encouraged by new drugs on the market, including insulin in the 1920s and the sulfonylurea class of oral antihyperglycemic drugs in the 1950s. Insulin resistance, upon which aspirin exerts its most beneficial effects, was not yet recognized.

"The potential of salicylates for treating diabetes had been all but forgotten by modern biomedical science," Shoelson says. "It's been a lot of fun rediscovering this effect and identifying the molecular target, but the hard work is yet to come. What we really need is a better, more specific 'aspirin' that reverses insulin resistance without all of the side effects. We don't know whether this is possible, but it certainly is what we'd like to accomplish." ■

Carol Cruzan Morton is a science writer for Focus.

## Class Day student speakers recall hurdles overcome and explore challenges ahead

**I**N EXHORTING MEMBERS OF THE Class of 2001 to take on broad responsibility as “healers of society,” Class Day keynote speaker Benjamin Carson urged graduates to bear in mind how sound character can spring from overcoming adversity. Recalling how his mother, a hardworking single parent, enabled him to escape the violence and poverty of the Boston tenements where he grew up, Carson noted that hardship is not necessarily “such a bad thing, because it puts fire in your belly.”

Carson also stressed the importance of respecting the roles of faith and spirituality in the work done by physicians, stating, “I think we should make it clear as we go forth, with all of our tremendous knowledge, that it’s also okay to go forth with Godlike principles of caring about your fellow man, of loving your neighbor, of developing your God-given talents to the utmost so you become valuable to the people around you.”

While Carson put the focus on general principles to follow in the pursuit of success, which

he defined as using and multiplying one’s skills “to elevate other people,” both medical student speakers at the Class Day ceremony described the ardors they and their classmates faced on the path to becoming physicians.

Jeffrey Munson, the first medical student speaker, pointed out that the occasion was not only a day of celebration; it was also a day when students take on a responsibility to society. He told his classmates and their families that medicine is more than just a career.

“When we become physicians,” he said, “we make a promise: a promise of humble service, a promise to temper natural greed with a selfless concern for our patients, a promise to fight for those who cannot or will not fight for themselves, a promise to see all comers for what lies within, a promise never to abuse the trust that is given to us by those with nowhere else to turn.” And he urged the new physicians to “live in refutation of those who would have self-interest replace our sense of duty.”

# THE LONG AND





# WINDING ROAD

*by* MICHAEL HIGGINS

The other medical student speaker, David Joyce, kept the audience laughing, even as he described the challenges the graduates faced on their way to becoming doctors. "Thomas Jefferson incurred less debt when he purchased the Louisiana Territory from the French back in 1803," he noted.

At the end of his talk, in a serious moment, Joyce reminded his classmates to "never doubt that the gratification of serving other people is far more valuable than any material gain or personal achievement."

This year HMS awarded 157 MDs to 75 women and 82 men. Twenty-nine percent of the graduates are underrepresented minorities, and 18 percent are candidates for an additional degree. Thirty-seven degrees were awarded through the Harvard-MIT Division of Health Sciences and Technology. Twenty MD-PhD degrees were awarded to four women and 16 men, and 68 PhDs were granted to 27 women and 41 men. ■

Michael Higgins is the editorial assistant for Focus.

# PRIZES &

The following medical degree recipients graduated with honors or special awards:

**Murat Zeki Akalin**

**and Rey Francisco Ramos**

Robert H. Ebert Primary Care Achievement Award for excellence and outstanding accomplishments in the field of primary care medicine

plify and/or promote the spirit and practice of community service

**Anne Meredith Chapas,**

cum laude

*Functional Analysis of the Fucosyltransferase VII Promoter in Leukocytes*

**Samuel Morris Brown**

Rose Seegal Prize for the best paper on the relation of the medical profession to the community: *Use of WHONET Software and Electronic Communication for Monitoring Antimicrobial Resistance: Preliminary Results from Russia*

**Clark Chin-Chung Chen,** cum laude

*Saccharomyces cerevisiae SGS1 Suppresses Hemealagous Recombination, Non-hamalogous Recombination, and Telomeric Addition*

**Howard Frederick Fine,**

cum laude

*The Role of Vascular Endothelial Growth Factor in Uveitis-Associated Cystoid Macular Edema*

**Esiquio Gustavo Casillas**

The Community Service Award to the senior who has done the most to exemplify and/or promote the spirit and practice of community service

## class oath

### Class

I solemnly swear, by all that I hold most sacred, that:

I will make the well-being of my patients my utmost concern;

I will see in each patient a fellow human in pain, and always be diligent and tender as

I seek to relieve suffering;

I will keep sacred the bond between doctor and patient and will respect the confidences entrusted in me;

I will honor my patients' autonomy and dignity, both in living and in dying;

I will maintain the utmost respect for human life and will not use my medical knowledge contrary to the laws of humanity;

I will work, in whatever house I enter, for the benefit of the sick, and will not commit any voluntary act of mischief or corruption;

I will promote the well-being of the community;

I will honor my mentors and continue to seek new knowledge, to teach, and to advance the art and science of medicine;

I will work in diligent and honest collaboration with my fellow practitioners;

I will maintain the honor and noble traditions of the medical profession;

I will be truthful, honest, modest, merciful, and objective;

I will admit my mistakes, amend my ways, and forgive the wrongs of others;

Today in the presence of family, friends, teachers, and colleagues, I dedicate myself to the profession of medicine/dental medicine.

Here am I, ready for my vocation, and now I turn unto my calling.

### Dean

For over two thousand years, doctors have taken an oath to affirm a commitment to their profession. This oath has served as a contract with their community and as a tribute to their teachers. In this vein, the Class of 2001 has created an oath that draws upon elements from the oaths of their teachers, both recent and ancient. I now invite you, as a class, to share in this tradition and to articulate the ideals and principles that will guide you in the years ahead.

PHOTO: JEFFREY REYNOLDS



# AWARDS

**Elizabeth Bowen Fortescue**, cum laude  
*Risk Stratification in Coronary Revascularization: Current Concepts and Future Directions*

**Jason Louis Gaglia**, magna cum laude  
Lean Reznick Memorial Prize for excellence and accomplishment in research: *Mediators of B7/CD28-Independent Costimulation of T Cells*

**David Avram Ganz**, cum laude  
*Cost-Effectiveness of HMG CO-A Reductase Inhibitors in Older Patients with Myocardial Infarction*

**Andrew James Gerber**  
Dr. Sirgay Sanger Award for excellence and accomplishment in research, clinical investigation, or scholarship in psychiatry: *Literature Review of Psychoanalytic Outcome Research*

**Neil Samuel Ghiso**, cum laude  
The NBI Healthcare Foundation Humanism in Medicine Award to a graduating medical student who consistently demonstrates compassion and empathy in the delivery of care to patients; *The Oxygen Regulation of Vascular Endothelial Growth Factor and Its Suppression by Nitric Oxide*

**David Charles Gordon**  
The Society for Academic Emergency Medicine Excellence in Emergency Medicine Award to a senior medical student who has demonstrated excellence in the specialty of emergency medicine, and the Gerald S. Foster Award in recognition of contributions to the student body by virtue of serving on a student-faculty committee including but not limited to the Committee on Admission

**Beverly Ashland Guadagnolo**  
Bemy Jelin '91 Prize to that senior who most demonstrates overall academic excellence with a career interest in pediatrics, oncology, international health, or psychiatry

**Roy Hoshi Hamilton**, cum laude  
Kurt Isselbacher Prize to the senior demonstrating humanitarian values and dedication to science; *Metamodal Cortical Processing Demonstrated in the Occipital Cortex of Blind and Sighted Subjects*

**David Shumway Jones**, magna cum laude  
Richard C. Cabot Prize for the best paper on medical education or medical history: *Visions of a Cure: Visualization, Clinical Trials, and Controversies in Cardiac Therapeutics, 1968-1998*

**Emily R. Katz, Walter John Lech, Constance Alexis Marks, Raul Ruiz, and Xun Clare Zhou**  
The Multiculturalism Award to the senior in each Academic Society who has done the most to exemplify and/or promote the spirit and practice of multiculturalism and diversity

**Colette Monique Knight**, cum laude  
*Mechanisms of Regulation of Ganadotropin Subunit Gene Expression by GnRH*

**Anne Shee C. C. Lee**, cum laude  
*Complementary and Alternative Medicine: Providers, Practices, and Pediatric Care*

**Diego Esteban Marra**, magna cum laude  
James Talbert Shipley Prize for excellence and accomplishment in research: *The Molecular Mechanism of Vascular Smooth Muscle Cell Growth Inhibition by Sodium Salicylate*

**Erica Elizabeth Marsh**, cum laude  
Wyeth-Ayerst Scholar in recognition of extraordinary accomplishment and potential to make significant contributions in the field of women's health: *Absence of Nocturnal Circadian Phase of Leptin in Controlled Circadian Studies in Normal Women*

**Bridget Kathleen McCabe**, cum laude  
*Reduced Neurogenesis Following Recurrent Neonatal Seizures*

**Andy Olivier Miller**, cum laude  
*Optimizing Secretion of Large Heterologous Antigens in Attenuated *Vibrio Cholerae* Vaccine Strains with the *Escherichia Coli* Hemolysin Export System*

**Eric Matthew Morrow**, magna cum laude  
Harald Lampart Biomedical Research Prize for the best paper reporting original research in the biomedical sciences: *Abnormal Photoreceptor Morphogenesis in *Crx*-null Mice: A Model for Leber's Congenital Amaurosis*

**Deanna Diemanh Nguyen**, magna cum laude  
Henry Asbury Christian Award for notable scholarship in studies or research: *Wiskott-Aldrich Syndrome Protein (WASP)-Deficient Mice: A Novel Th2 Model of Inflammatory Bowel Disease*

**Marco Valentin Perez**, cum laude  
*A Tripartite mdm2/p53/p300 Complex That May Regulate p53 Degradation*

**Rebecca Bernstein Perkins**, cum laude  
*Spectrum of Neuroendocrine Abnormalities, Response to Neurotransmitter Modulation, and Predictors of Recovery in Hypothalamic Amenorrhea*

**Jean Leclerc Raphael**  
The New England Pediatric Society Prize to the senior who, in the opinion of peers and faculty, best exemplifies those qualities one looks for in a pediatrician

**Amir H. Taghinia**, cum laude  
*Regulation of Axon Growth and Gene Expression Is Mediated Through a Purine-Sensitive Pathway*

**Barbara Saatkamp Taylor**, cum laude  
*Gene Expression and Transcriptional Profiling of Adipogenesis: In Vivo and In Vitro Models*

**Ping Zhou**, cum laude  
*Cloning and Characterization of the Promoter Region of Mouse Telomerase Catalytic Subunit (*mTERT*) Gene and Comparing the Promoter Activity with Its Human Counterpart*



# GREAT

A physician describes the power of

MEDICINE IS AN INCREDIBLE ADVENTURE. IT'S THE ONLY THING that has ever really interested me. I can remember as a youngster spending many hours in the hallways of Detroit's Receiving Hospital or Boston City Hospital because we were on medical assistance and had to wait until one of the interns or residents was free to see us.

I didn't mind at all, because I was in a hospital, and I would occupy myself by listening to the P.A. system. "Dr. Jones, Dr. Jones to the emergency room. Dr. Johnson, Dr. Johnson to the clinic." And I would just imagine that one day they'd be saying, "Dr. Carson, Dr. Carson to the O.R." Of course, now we have beepers, so I still don't get to hear it. But it was so important to have that dream.

Life kind of fell apart for me quite early on. My parents got divorced. My mother, who was one of 24 children, got married at age 13. She and my father moved from rural Tennessee to Detroit, where he worked in a factory. She discovered that he was a bigamist and had another family. We ended up moving to Boston to live with my aunt and uncle in a typical tenement—rats, roaches, sirens, gangs, murders. Our heroes were the drug dealers because they gave candy to the kids. I can remember seeing people lying in the street with bullet holes in their chests.

It really does make an impression on you when you become extraordinarily familiar with the burden of poverty. But I'm not so sure that it's such a bad thing, because it puts fire in your belly. Hardship is good, and that's something that I want you all to remember over the next few years as you go through internship and residency. It's a good thing. It too will pass, and life should get better at some point.

My mother believed that if she worked hard enough—she worked as a domestic, cleaning other people's houses, two or three jobs at a time—one day she could become

// We were desperately poor, with no money for anything



# EXPECTATIONS

believing in oneself | *by* BENJAMIN CARSON

independent. Eventually we moved back to Detroit, still in dire poverty, still in a multifamily dwelling.

I was a terrible student at that time, probably the worst student you've ever seen. My nickname was "Dummy" because I didn't know anything. And I remember once we were having a disagreement about who the dumbest person in the class was. It wasn't that big of a discussion, because everyone agreed that I was the dumbest. But someone tried to extend the argument to whether I was the dumbest person in the world, and I took exception to that, so we had a really vigorous argument.

Unfortunately, we had a math quiz that day, and I got a zero. Now, that wasn't a problem; I always got a zero. The problem was that on this day the teacher said you had to pass your test to the person behind you and let that person correct it and give it back to you. Then the teacher would call your name and you had to report your score out loud—not a problem if you got a 100 or 95, but a big problem if you got a zero and had just had an argument about the identity of the dumbest person in the world.

I couldn't find a way to get out of the class, so I thought I would scheme. I said to myself, "You can figure out a way out of this. When the teacher calls your name, just mumble. Maybe she'll misinterpret what you said, write it down, and move on." So when she called my name, I said, "Nnnumph." And she said, "Nine? That's wonderful, Benjamin! I knew you could do it if you just applied yourself! Class, I want you to understand the significance of this. If Benjamin has gotten nine right, anybody can get nine right. If Benjamin got a nine..." and she went on ranting and raving.

Finally the girl behind me couldn't take it any longer. She stood up and said, "He said, 'None.'" The teacher was so embarrassed, and the kids were rolling in the aisles. If I could have disappeared into thin air, never to be heard from again in

the history of the world, I gladly would have done so. But I couldn't. So I just sat there and acted like it didn't bother me.

But it did. It bothered me a lot—not enough to make me study, but it bothered me a lot. Fortunately, I had a mother who believed in me when nobody else did. And she prayed to God to give her the wisdom to know what to do to get her sons to develop their minds. And God gave her the wisdom—at least in her opinion. My brother and I didn't think it was all that wise. Turn off the TV set? What kind of wisdom was that? As far as we were concerned, that was child abuse.

But she said we could watch only two or three TV programs per week. And with all that spare time, we had to read two books apiece from the public library and submit to her book reports—which she couldn't read, but we didn't know that. She put little check marks on them; I thought she was reading them.

An interesting thing began to happen. We were desperately poor, with no money for anything. But between the covers of those books, I could go anywhere. I could be anyone. I could do anything. I was imagining myself in a laboratory pouring chemicals into beakers, and wiring electrical circuits, and discovering microcosms under the microscope. I could never pass up a puddle without getting a specimen and peering into the microscope at school at the hydra and the paramecium and the volvox and all those things. It was fascinating. I could be there for hours.

Something funny happened. After a while, the teacher would ask a question and I would be the only person with an answer. And by the time I was in the seventh grade, I'd gone from the bottom of the class to the top of the class, much to the consternation of all those students who used to laugh and call me Dummy. The same ones would now come to me and say, "Benny, how do you work this prob-

But between the covers of those books, I could go anywhere. //



lem?" And I'd say, "Sit at my feet, youngster, while I instruct you." I was perhaps a little obnoxious, but it felt so good. But I got to the point where if I got a 99 on a test and somebody else got a 100, it was devastating. I couldn't live with myself. I'm sure some of you can identify with this.

I remember when I was in the ninth grade, I went up to some of my classmates and asked, "Guys, why do you hate me so much?" And they looked me dead in the eye and said, "It's because you're so obnoxious." And I said, "Obnoxious? Moi?" They said, "You always have to have the highest grade in everything," and it was like someone had stabbed me with a dagger, because I knew it was true. I had become just like the people that I hadn't liked before. And I realized that all I had to do was my best, that I didn't really need to compare myself with anyone else. And a tremendous burden was suddenly lifted from my shoulders.

What's really important in that story is recognizing that when I was in the fifth grade, I thought I was stupid, so I conducted myself like a stupid person and achieved like a stupid person. When I was in the seventh grade, I thought I was smart, so I conducted myself like a smart person and achieved like a smart person.

**THE SECRET OF HIS SUCCESS:**  
Benjamin Corson  
expounded on the  
importance of faith—  
both in oneself  
and in God.

What does that say about expectations? We as health care providers are among the most highly educated people in society. We have to take a stand, because there is so much ignorance in our land right now. When we compare our students in grade school and high school with students in other industrialized nations, we see that we're scraping the bottom of the barrel. We cannot afford to continue to do that as we move further into the technological age.

So when you take on that mantle as a doctor, think about being a healer. Think about being a person who promotes the kinds of values that encourage young people to develop themselves successfully. Because if we don't do it, who else will? And our efforts will make a big difference.

Think back on other great societies—ancient Egypt, ancient Greece, ancient Rome—top of the world, no competition, just like we are right now. Where are they now? What happened? They became enamored of sports and entertainment, lifestyles of the rich and famous; they lost their moral compass and they went right down the tubes. Some people say it can't happen in this nation, but I believe it's already happening. And the question is, can we stop it?

When we go out there, we have to do more than just be excellent in our laboratories and operating rooms and clinics. We have to espouse the right kinds of things, be healers of society. What a difference we can make if we do that.





And think about the intellectual aspect of human beings. Is there anything as wonderful as the human brain? I say that not only as a neurosurgeon, but also as a human being. It is a wonderful organ system, more complex than any computer. It *invented* the computer. It can process more than two million bits of information per second, and it remembers everything you've ever seen, everything you've ever heard.

The human brain can do all of that, and we barely have to think about it. Can you imagine what the human brain is capable of when we actually put some energy into a project? That's what we've got to start considering.

You would have thought that, having understood those kinds of things, I was on my way. But then I got to high school and got caught up in peer pressure. My grades began to drop. Fortunately, I eventually got back on the right track and won a scholarship and went off to Yale. But that peer pressure is something that continues throughout life. And it is an awful thing in medicine.

For instance, that intern, that resident—they're nice people. You like them, they have a sense of humor, they're wonderful. But by the time they're chief resident, they're some of the nastiest SOB's you've ever seen. What happens along the way? Peer pressure. When people begin to think that it's macho to yell at people and to throw instruments around the operating room, we in the medical profession have to stamp that kind of thing out. That's not who we are. That's not who we should become.

You're also going to hear people saying, "Don't become emotionally attached to your patients because you're going to

be hurt." I have never discovered how *not* to be emotionally attached to my patients. When a young child comes in with a brain tumor and I see his distraught mother and I think about my own children, I can't become detached. When I look at the brain that makes that person who they are, I can't become detached.

You're going to be very busy. But remember that it means so much to your patients when you show some caring. Instead of standing at the door for five minutes proclaiming how busy you are and how you haven't slept for two days and how you can't do anything, if you were to go in that room, sit down on the bed, and put your hand on your patient's hand and say, "Mrs. Jones, I understand you're having some problems and I will be back as soon as I can," and walk out the door, it would mean so much more than that five-minute dissertation, just showing some compassion.

Patients really do respond. I've never spent a day in court, even though my specialty is neurosurgery, and it's not because I haven't made any mistakes. But if you are honest with people and if you care, they will see that and they won't sue you. I can guarantee you that. Spend time with them

because, as I tell my residents, you can spend time with them now or you can spend time with them in court. You make the choice.

The other important thing about peer pressure is this: don't be like the people of my generation who sit there and complain about how managed care is destroying medicine but don't do anything about it, leaving decision making in the hands of businesspeople who are also responsible for earnings per share. They're never going to make the right decisions. We can't allow that to continue. We're the only people who can advocate for patient rights. No one else understands the way we do.

Unless we come up with alternative proposals and stop complaining, nothing is going to get done. People are saying the pendulum is going to swing back. It isn't going to swing back, because people don't give up an advantage when they have it. We've got to force the pendulum back, and that's part of what we do as healers of society. We are the people responsible for health. And I don't care how many business degrees you have; you can't be responsible for people's health. That MD, that DDS, is going to put you in a special and trusted position. This is our last chance, your generation. We cannot squander it or we are going to squander our profession.

Finally, what is success in life? Is it big houses and fancy cars and all that stuff? I don't think so. I have those things, but I don't think they define success.

In 1997, when I was asked to go to South Africa to lead a team to separate type II conjoined twins, I knew I was facing a great medical challenge. The twins were joined at the top of the head, facing in opposite directions. There had been 13 previous attempts to separate type II conjoined twins, but none had been successful.

But there was another aspect. It was going to be done at the Medical University of Southern Africa, the only major black teaching hospital in that country. They thought if this operation could be done there, they could stand shoulder to shoulder with Cape Town, Johannesburg, and all the great universities.

I wasn't ready for that social pressure, so I said, "Lord, you've got to help me, because smarter and more capable people than me have tried and failed." As I was studying the various radiographs, I noticed that the drainage system that the twins shared was a little narrower in the middle than it was on either end. I felt strongly that I should not do what the traditional literature says, which is to decide which one to give the drainage system to and divide the other one over the course of several operations, to allow collateral circulation to develop. Instead, I felt we could divide it right in the middle and that the circulation would adjust itself intraoperatively and that the twins would, in fact, be able to survive.

When I explained that to the group, they said, "You're the boss. We're going to do what you want us to do." I



**FACES OF TOMORROW:**  
Graduates took inspiration from Benjamin Carson's message of discipline and optimism.

remember going into the operating room two days before the New Year of 1998. There was a big sign in the operating room that said, "God bless Joseph and Luka Banda." They were having song service and prayer service. I was thrilled. I asked them to bring in a stereo system so we could play inspirational music.

Nineteen hours into the surgery, we were only three-quarters of the way finished. The part that remained looked impossible: the blood vessels were engorged, adhered, and entangled. We stopped the operation and went into conference.

I said, "Maybe we can just cover that area over with skin and come back in several months, and maybe they'll have developed collateral circulation and we can cut through that area and they'll survive." And the doctors from Zambia, where the twins were from, said, "That's a great idea. We know you can do that at Johns Hopkins, but we don't have the ability to keep partially separated twins alive."

Now I really felt the weight of the world on my shoulders as I went back in there without all my fancy equipment. I had my scalpel and a prayer on my lips. I said, "Lord, it's up to you." I started to cut between those vessels that were thinner than a sheet of paper—you could see the blood coursing through them. I felt so helpless. But just when I made the final cut between those two twins, over the stereo system came the "Hallelujah" chorus. Everyone had goose bumps.

One of those twins, when we finished that operation after 28 hours, opened his eyes and reached up to the tube. By the time we got to the ICU, the other one did the same thing. Within two days, they were extubated. Within three days, they were eating. Within two weeks, they were crawling around perfectly normal and they remain that way today.

But that wasn't the success. The success you had to be there to witness. People were following this story closely in the papers and on the radio and television, and they were ecstatic. People were literally dancing in the streets. We could not walk down the hallway. And that's what I think is real success, when you take talent that God has





given you and you multiply it and use it to elevate other people. And that's what I mean when I say, THINK BIG.

The T is for talent, which God gave to every single person: not just the ability to sing and dance and throw a ball but influential talent. You have it. Please use yours to develop yourself in your sphere of influence.

The H is for honesty. If you lead a clean and honest life, you won't put skeletons in the closet because if you do, they always come back and haunt you just when you don't want to see them.

The I is for insight, which comes from listening to people who've already gone where you're trying to go. No need to reinvent the wheel.

N is for nice; be nice to people, because once they get over the suspicion of why you're being nice, they'll be nice to you. You get so much more done that way.

The K is for knowledge, which is the thing that makes you a more valuable person. Yes, I live in a big house and have a lot of stuff. But you know, if someone took all that

away today, I wouldn't care. It would mean nothing. Why? Because I could get it all right back almost immediately with what's in my head. That's what Solomon, the wisest man who ever lived, meant when he said that gold and silver and rubies are nice, but to be treasured far above those are knowledge, wisdom, and understanding, because they are what give you a sense of what's really important.

The B is for books, which are the mechanism of obtaining that knowledge.

The second I is for in-depth learning, learning for the sake of knowledge and understanding versus superficial learning. Superficial learning is for people who cram before a test. Sometimes they do well, but three weeks later they know nothing. That's how we got to be number 21 in a survey of grade school students in 22 industrialized nations. We can't afford that.

The last letter, G, is for God. Many people get a lot of degrees behind their names and start trying to rearrange the letters to make them spell God. There's something special about recognizing that there's a higher power. We live in a society now where people are trying to exclude God.

I wonder if those people know that this country was founded on religious principles. I wonder if they understand that the preamble to our Constitution, that our Bill of Rights, talks about certain inalienable rights that were given by our Creator—God. I wonder if they notice the Pledge of Allegiance to our flag, which says that we are one nation under God. I wonder if they've ever been in a courtroom where on the wall it says, "In God we trust." Do they have any money? Every coin in our pocket, every bill in our wallet says, "In God we trust."

So when people talk about the separation of church and state, what do they mean? If God is on all those things and we can't talk about His presence there, I think it's a form of schizophrenia. And doesn't this explain a lot of what has been going on in our nation today? I think we should make it clear as we go forth, with all of our tremendous knowledge, that it's also okay to go forth with Godlike principles of caring about your fellow man, of loving your neighbor, of developing your God-given talents to the utmost so you become valuable to the people around you, of having values and principles.

And when you do that, not only will you be healers when you go into the hospitals and clinics, but you'll also be healers of society and you'll start us on the way to having something we've talked about since kindergarten, and that is one nation under God, indivisible, with liberty and justice for all. ■

*Benjamin Carson, MD, has been director of the Division of Pediatric Neurosurgery at Johns Hopkins since 1984. He is also co-director of the Johns Hopkins Craniofacial Center. Carson is the author of three best selling books, Gifted Hands, Think Big, and The Big Picture.*

# RENEWING AN

A graduate reflects on the sacred and binding trust that

TODAY MARKS A DAY OF PERSONAL CELEBRATION, AND FOR the accomplishments of those fortunate enough to be sitting here, it is a celebration well-deserved. Our loved ones have gathered to join us in commemorating the successes of our recent past, and to indulge, if only a little, in our pride. In this setting, it is easy to be distracted by our achievement and to see only the festivities at hand.

But today is so much more than a celebration. It is also a day of ceremony, an occasion on which we join a covenant with society that has defined our profession for centuries. A nation of those who will be our patients has gathered just beyond the circle of familiar faces, just beyond the edges of the present. They are strangers, friends, parents and children, colleagues, ourselves. They come with their lives in their hands, uncertainty in their eyes, and hope in their hearts. And they bring us their trust, so fragile and so precious, and their respect, so rarely given in our time.

They are a nation of the sick, and they stand in silence, waiting to witness the promise of a new generation of physicians. Although they make no sound, their questions are as clear as their needs: When there is no one left beside me, will you take my hand and walk with me? Will you resist the temptation to deceive me, when I have neither the strength nor the knowledge to know the difference? Will you keep your midnight vigil, so that I may sleep without fear of the dark? Will you use your considerable talents with humility? And will you, on this, your day of private celebration, stand tall and make public your profession that above all else, you will do no harm?

These questions are the fundamental challenges of the lives we have chosen, and rising to meet them will

require great sacrifice, just as the path to this moment has demanded so much. But the road that lies ahead, past the gateway of our promise to serve those in need, is as rich and beautiful as it is arduous. It is a passage through a world so real it strains to be called a dream for fear that the pain and the pleasure may become too much to bear.

The language that surrounds us is an intimate communication of yearning and connection, rather than the superficial pleasantries that seek to create rather than cross distance. As the sick and the well pass one another, the meeting of I and Thou bonds strangers in a moment of transcendent human understanding.

It is a world in which a gentle touch engenders trust, not suspicion and fear; a world in which pain and loneliness can be transformed into peace and partnership. It is a world in which suffering is profound, but the gift of hope and life even in the face of death is more profound still. And as physicians, we are the travelers blessed with the opportunity to walk among the sick in this world of human reality, bringing that gift of hope and life to each bedside as we journey on toward our own eternity. That is our duty, and that is our greatest privilege.

There are those both outside and within our profession who would dismiss the notion of a societal covenant as romanticized folly, and who discuss medicine as a career in which payment is given for services rendered in a world no different from that of everyday life. I could not disagree more. When we become physicians, we make a promise: a promise of humble service, a promise to temper natural greed with a selfless concern for our patients, a promise to fight for

**LEAP  
OF FAITH:**  
Jeffrey Munsan  
reaffirmed the extraordinary covenant that  
exists between doctors  
and patients, which he  
called both a duty  
and a privilege.

// They bring us their trust, so fragile and so precious,



# ANCIENT COVENANT

society places on doctors | *by* JEFFREY MUNSON



nowhere else to turn. It is in exchange for the fulfillment of these promises that society places in our care its most fragile and vulnerable citizens. That is the nature of our covenant, and it must transcend the realm of ordinary business, for it is a transaction in human life. So, too, must our profession rise above the level of a trade organization, for we are the stewards of this contract, and our collective failure would create so much more than a monetary cost.

So as we leave here today, let us have the strength and courage to follow our calling and live in refutation of those who would have self-interest replace our sense of duty. Let us live in keeping with our oath, and let us fulfill our obligation of service.

When we become weary of the road ahead, let us pause to breathe in the richness of our world, and drink deeply of the lives of those in our care, for they are our fountain of youth, and their health and peace are our salvation. And at our journey's end, let the measure of our days be the chorus of thousands whose lives somewhere along the way were made more complete and more beautiful because, on this day, we became doctors. ■

those who cannot or will not fight for themselves, a promise to see all comers for what lies within, a promise never to abuse the trust that is given to us by those with

*Jeffrey Munson '01 is undertaking a residency in internal medicine at Yale-New Haven Hospital.*

and their respect, so rarely given in our time. //

# BECOMING A JEDI

A young physician offers a lighthearted perspective on the trial

JUST WEST OF BOSTON'S BACK BAY, THERE'S A PLACE WHERE the same scientists who eradicated smallpox and polio from the Western Hemisphere are working on a vaccine for HIV. You can rub shoulders with 11 different Nobel laureates, or get gross anatomy tips from world-famous surgeons like Judah Folkman and William Silen. But if you plan on attending classes at Harvard Medical School, you'd better bring your Visa card, because the cost of one year is \$44,900, and they don't take American Express!

Just think: if you'd invested that money in Oracle or Sun Microsystems, you'd be worth close to \$2 million today. And if that's not depressing enough, consider this: Thomas Jefferson incurred less debt when he purchased the Louisiana Territory from the French back in 1803.

Medical school took its toll on more than our bank accounts, however. As afternoon New Pathway naps gave way to 24-hour emergency room shifts, we began to experience the exsanguination of our social lives. And you can always tell when you haven't gotten out in a while: like if the last movie you went to see was narrated by radiologist Lucy Squire; or if you thought *The Matrix* was something you grew fibroblasts on; or if the last four people you've dated get email from the "Quad Bulletin." You know who you are. I'll be the first to admit that the last time I placed my hand on a woman's chest for thrills was during a workup to rule out aortic insufficiency.

I'll never forget the irony of Liam Neeson's line in the latest episode of *Star Wars* when he warned, "Training to become a Jedi isn't an easy challenge. And even if you succeed, it's a hard life." Yeah, cry me a river. Frankly, I'd like to see how Obi-Wan Kenobi holds up after missing

yet another meal to go manually disimpact Jabba the Hut while being asked by his senior resident to summarize Ranson's criteria in 15 words or less.

But I don't have to tell you guys about the challenges inherent in the profession we've chosen. You've all suffered through the eight-week stench of formaldehyde, the agony of the brachial plexus, and the pure torture that is commonly referred to as biochemistry. You've listened at lightning speed to the current understanding of Sonic hedgehog and struggled to keep your colored pencils in order as you contemplated the mysteries of gastrulation. You've experienced the sensation of general anesthesia even as you sat in lectures on the same topic.

As we remember the sacrifices we made to be here today, I hope we will not forget the purpose behind our efforts [*"Pomp and Circumstance" starts playing in the background*]. Although we won't make as much money as our friends at the business school or enjoy the nine-to-five lifestyle of many of our colleagues across the river, we'll have the satisfaction of knowing that our efforts will relieve human suffering. Our reward for the long hours spent on call will be the smile on a young child's face after we... [*pause, as he notices that a graduate has raised his hand*] I'm sorry, do you have a question?

Graduate: "When you have asthma, is it easier to breathe in or breathe out?"

Hmmm, Bruce Zetter warned me about this... [*speaking very fast*] While the physiologic mechanism of reactive airways disease impairs the ability of air to be expelled from the alveoli, the subjective experience of the asthmatic is actually one of difficult inspiration.

**LAUGHTER IS THE BEST MEDICINE:** David Joyce gave a humorous take on four years of medical school—and the debt that students incur during that time.

// Thomas Jefferson incurred less debt when he purchased



# ISN'T EASY

and tribulations of medical education

by DAVID JOYCE

Anyway, as I was saying, we have endured much to get where we are today. And now we are very close to being finished.

How close are we? Well, let me put it this way: if medical school were Beethoven's Fifth Symphony, the first year class would be listening to this *[sounds of an orchestra tuning]* and we would be here *[final notes of Beethoven's Fifth]*. If medical school were the Boston Marathon, the first years would be here *[sounds of cheering]* and we would be here *[sounds of retching]*. If medical school were the Kentucky Derby, we would be right here *[sounds of a horse galloping]* and the first-years would be here *[sounds of a horse relieving itself]*. If medical school were a Whipple procedure, the second year class would be right here *[suction noise with heart monitor beeping in the background of an operating room]* and we would be here *[suction noise with heart monitor beeping in the background of an operating room]*.

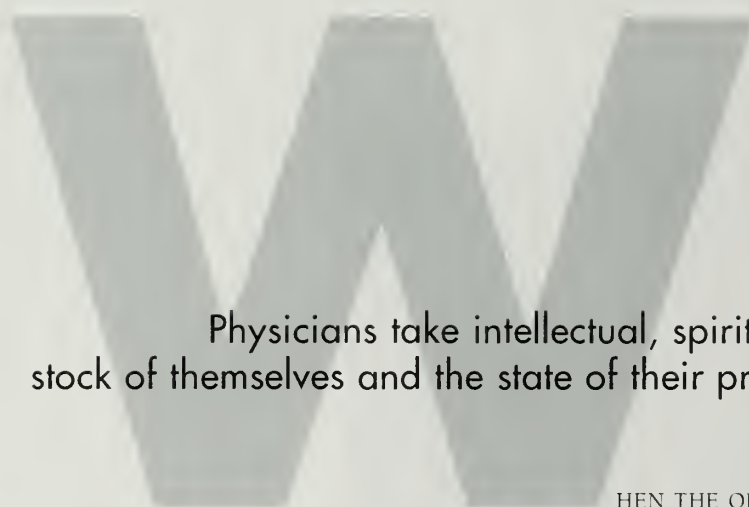
And finally, if medical school were this speech, we would be at the part where I say, congratulations on surviving what may have been the most difficult years of your lives. Never doubt that the gratification of serving other people is far more valuable than any material gain or personal achievement. Thank you, and keep in touch. ■

*David Joyce '01 is undertaking a residency in general surgery at the Johns Hopkins Hospital in Baltimore, Maryland.*



the Louisiana Territory from the French back in 1803. //

## REINVENTING



Physicians take intellectual, spiritual, and ethical stock of themselves and the state of their profession

WHEN THE OPENING SPEAKER TOOK the podium at the Alumni Day Symposium, many in the audience must have wondered what language he was speaking. “*Eraritjaritjaka, eraritjaritjaka*,” Charles Hatem ’66, the Harvard Medical Alumni Association president, began. “I have *eraritjaritjaka*.” Hatem, director of medical education at Mount Auburn Hospital, explained that this Australian aboriginal concept, meaning “filled with desire for something that is lost,” was evoked by Belgian physician Joris Nauwelaers in his December 2000 *Lancet* essay lamenting the disappearance of the time-honored skills and practices of general medicine. In keeping with the symposium theme, “Strategies for Physician Renewal,” speakers offered diagnoses and remedies for other ailments that commonly afflict today’s doctors. ■

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*Tom Reynolds is a writer in the dean's office at Harvard Medical School.*



# OURSELVES

*by* TOM REYNOLDS



# TASTING OUR OWN

A physician offers colleagues a prescription for finding both personal

RARITJARITJAKA. ERARITJARITJAKA.

"I have *eraritjaritjaka*. In fact I have had *eraritjaritjaka* for some time, but it is becoming worse; that is why I felt I had to write about my condition—not only for my own sake (I'm not that important) but to help mankind."

So wrote Joris Nauwelaers in a prize essay published in *The Lancet* last December. *Eraritjaritjaka*, a poetic expression in the language of the Aranda, an aboriginal tribe in Australia, means, "filled with desire for something that is lost."

What is our colleague lamenting? He mourns the loss of teachers committed to making the study of medicine a thrilling experience, of teachers who felt deeply responsible for the doctors they were making. He laments the loss of heroes, those who inspire us, who make us want to be like them. He is pained at the loss of the primacy of the patient's history, of the constriction of interviewing and physical examination skills. He is outraged at bureaucratic interference with medicine; and he shares with us Stanislaw Lee's reflection, "There will always be Eskimos who would tell the Congolese what to do when the weather is too hot."

Dr. Nauwelaers sees and feels all of this, and has *eraritjaritjaka*. And so do we. As with pernicious anemia, in pernicious medicine, extrinsic issues are only part of the lesion. Intrinsic elements abound. For example, does anyone in the audience know any compulsive people?

The obsessive-compulsive personality has some interesting characteristics. According to the *Diagnostic and Statistical Manual of Mental Disorders*, these include: a preoccupation with details, rules, lists, order, organization, or schedules to the extent that the major point of the activ-

ity is lost; a sense of perfectionism that interferes with task completion; an excessive devotion to work and productivity to the exclusion of leisure activities and friendship; a reluctance to delegate tasks.

There is no question about the upside of compulsiveness, as in attention to detail in patient care or the pursuit of a new idea. But it is the liability side of compulsive behavior in physicians that demands attention, leading as it does to the belief on our part—and I must

say on society's part as well—that we ought to make no errors. This same compulsivity also establishes us as excessively vulnerable to criticism (which is one reason, I think, why feedback—especially in medical education—is so tough). Left unmodified, compulsivity can indeed cripple.



CHARLES HATEM

John-Henry Pfifferling, a medical anthropologist, writes poignantly about these matters. Over a decade ago, he reported on his experience in dealing with some 1,200 physicians who had "lost" in their personal and

professional lives. He asked them, "Given the difficulties that you now find yourself in, what do you wish you had learned in residency or medical school training?" Listen to their messages for us:

- set life priorities and validate them with those personally important to you;
- learn to nurture yourself, set realistic goals, and reduce your need for external validation;
- seek and learn to enjoy solitude;
- take regular vacations (Pfifferling proposes a line of vacation luggage called "Guilt," designed for small journals, big journals, laptops, cell phones, and the like);

// Renewal is rooted in attention not only to our values, but



# MEDICINE

and professional fulfillment

by CHARLES J. HATEM

- understand your needs and the needs of your loved ones;
- beware the consequences of overwork;
- learn to deal with grief, failure, and disappointment;
- learn to share your feelings;
- learn how to say, "I don't know";
- let go of the need to rescue;
- learn how to say no, and feel good about it;
- leave your work at the office; and
- recognize the dangers of self-medication.

One is reminded, upon hearing this litany, of what a participant said to management guru Tom Peters after one of his seminars. "You know, what you are talking about is a blinding case of the obvious!" The problem, of course, is the dissociative mismatch between what we say and what we do.

George Beauchamp, a pediatric ophthalmologist who does medical management work, tells the story of the frog in a beaker being slowly heated. There is no response to the mounting thermal insult until the frog succumbs. Inattention to environmental toxicity leads to professional hypocrisy. Too often, we dispense advice about a balanced life that we routinely ignore.

Renewal cannot be reduced to a single intervention; we must adopt a sustaining mindset. In the language of the day, primary prevention is the way to go, but we must remember that intervention at any time is appropriate and needed. We need to pay attention to the messages of Pfifferling's physicians; we need to stay renewed professionally and to tap into the richness of current information sources in new ways. Professional and personal renewal are also available from outside the world of medicine. Renewal is rooted in attention not only to our values, but also to the attitudinal lens we use in viewing the world.

Frederic Hudson, a psychologist working in the field of adult renewal, writes of core values as perspectives around which we can organize our lives and with which we can "reboot our systems." There is, for starters, the "Who am I?" question. There is a growing sense of the role of spirituality in medicine and the need for a spiritual awakening among physicians. This is not meant in the religious sense, though it by no means excludes it. Rather, I mean spiritual in the context of a commitment to a larger set of transcendent values as a framework for what we do, as a key part of the front-wheel drive in our lives.

The connecting piece comes from the reaffirmation of personal values. Barrie Greiff, a psychiatrist, writes of traveling with his daughter in Vermont and seeing the sign, "Asparagus for sale." Upon meeting the farmer, and being invited to tea, Greiff learns of his host's end-stage myeloma, which has brought him to this place, where he stocks the pond and replants the soil. This replenishing of life represented for the farmer part of his legacy, part of his value system. Greiff connects this experience with the notion of the ethical will. Such actions convey to one's successors a statement of life values and perspectives to be cherished. So, think for a moment. What are your values?

Sharon O'Malley, contributing editor to the *Quality Letter*, describes the power of "naming the things that go to the core of where we find our sense of meaning...in our work lives. What do you value deep down to your toes? We see people begin to recognize that their core values equate to core purpose." Within this core perspective of reaffirming personal values is clearly a commitment to family and friends. Our commitment to those close to us can slip away unless it is tethered to our values. Our commitment to colleagues likewise needs cultivation as a vehicle for mutual support and renewal.

also to the attitudinal lens we use in viewing the world. //

Within the reaffirmation of personal values is the need to be clear about the role of play and creativity in our lives. Remember our colleagues' admonitions about vacations. Short of these respites, finding time for renewal in other non physician parts of our lives is essential, but again often put on hold. No doubt, literature is one such resource, given the pleasure of literature on its own merits as well as the power of writing to help us understand the care of patients in a way that no textbook has the power to do.

We also need to be renewed through the reaffirmation of our professional values. The affirmation of fundamental ideals is well captured in the Patient Physician Covenant, which talks of humility, honesty, intellectual integrity, compassion, and the effacement of excessive self interest as traits that mark physicians as members of a moral community dedicated to something other than its own self interest.

Renewal is further to be found in reaffirming the privileges and prerogatives of practice. Think of patients who have moved your soul. And I mean patients—not clients, customers, or units of productivity, but patients!

The question comes to this: Are we prepared to reaffirm that which gives us joy in our work? Pfifferling makes an interesting point in this regard: "If 'negative' feelings such as anger and fear are suppressed," he argues, "then the ability to feel love and joy is also incapacitated." Remember T. S. Eliot's admonition: "We had the experience but missed the meaning." Reaffirming the value of our work is the essential ingredient in renewal.

John Gardner, a long time observer of the health care scene, says, "I can tell you that for renewal, a tough minded optimism is best." It is easy to be cynical and indeed, Gardner suggests that perhaps, "Pessimists got that way by financing optimists." Strip away the rhetoric and recognize how powerful this advice is: putting life's mischief in con-

text is liberating, sustaining, renewing. Dampen the anger, which is a corrosive lubricant in dealing with the world.

We have seen this most fundamental challenge of calibrating attitude throughout history. Franklin Delano Roosevelt, presenting in his radio fireside chats the key themes of his presidency—the New Deal, the economic pain of the Great Depression, and World War II—shaped this most basic message: In times like these, attitude is everything.

We have repeatedly seen this matter of freedom to choose one's attitude in any given set of circumstances as the key to success: from the life of Nelson Mandela to John XXIII, who, at age 76, was elected pope and stood the Catholic Church on its head. His attitude on life was disarming yet balanced. He advised that one see everything, overlook most of it, and change a little.

But I do not wish to suggest that this mindset belongs only to the exceptional. We see it regularly in our patients, who persevere despite enormous burdens. We should attend to the lessons they teach us. So here, my good, list-keeping, guidelines-directed colleagues, is a template, the key to the course. Pfifferling's accounting of the traits of colleagues who stay joyful despite ambient toxicity are as follows: a sense of humor; strong support from those we love, our friends, and our colleagues; clear values; collegiality; and awareness of personal needs.

Sound simple? Sound like the soft stuff? Remember, my colleagues, that we dispense this advice regularly. Come on now! Down with professional hypocrisy! Up with listening to ourselves! Save some of your daily ATP production for yourself and those close to you. Your work will be enhanced. This is not selfishness, but self preservation.

Be renewed! ■

Charles J. Hatem '66 is director of medical education at Mount Auburn Hospital in Cambridge, Massachusetts.

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# DIGITAL MEDICINE

How can physicians use the information revolution to renew themselves and improve care? | by ROBERT H. FLETCHER

WHEN MY WIFE, SUZANNE FLETCHER '66, AND I RECENTLY gave grand rounds on finding clinical information, an older physician came up to me and asked, "How is that electronic textbook you mentioned doing? If I didn't have it, I would have to stop practicing medicine!"

Of course, renewal outside of work is very important. I recharge my batteries with carpentry, stone-wall building, sailing, gardening—and I'd do a lot more if I could find the time. But we physicians spend so much of our time at work that any balanced, complete view of renewal must include that time too.

Actively embracing the information revolution—as that older physician has—is part of physician renewal. It can make work more fun, interesting, and comfortable in these overcharged times. Standing pat and hoping to ride out the changes is bound to compound the distress.

Let's begin by admitting that we need help. The information required to practice medicine used to fit comfortably into an ordinary brain. When I was a resident and had a patient with acute pulmonary edema, I could mentally sort through the therapeutic options without difficulty: phlebotomy; rotating tourniquets; mercury injections (perhaps with aminophylline); and morphine. That was it. And it was usually simple to decide what to do: use all of them and hope that would be enough.

Now the options are so rich and varied that it can be difficult, if not impossible, to commit many

conditions and their treatments to memory and carry them around in our heads.

Take, for example, the treatment of HIV infection. The recommended drug regimen has grown, just in the past few years, to include several classes of drugs, and several options within each class. Patients must, without fail, take three different drugs to which their virus is sensitive if they are to keep the virus in check.

How do we wrap our brains around all of this information? Those of us in one of the big teaching hospitals, with so many experts close at hand, may feel we can handle things simply by consulting our colleagues. But one does not have to go far—to smaller hospitals, to offices in the community, or away from HMS—to unmask the problem.

Well, you might say, such patients should be under the care of a specialist who really does know all those things

cold. Sure, but what if that clinician, let's say an HIV specialist, needs to adapt his or her care to the oncologist's management of malignancies complicating immunosuppression? Or of the lipid disorders that antiretroviral drugs cause? Commanding an almost impossibly broad array of information is a problem not only for generalists like me.

Fortunately, now there is help for clinicians, on our own terms. As clinicians, we must be able to access information quickly, usually within seconds, if we are to use it in a busy practice at the time clinical decisions are being made and teaching done. If we do not find answers immediately,



ROBERT FLETCHER

// Clinicians must be able to access information quickly. //

we are likely not to find them at all. We move on to other patients and do not return to the original question. At the end of the day, we are tired or have something else, perhaps even something renewing, we want to do. So in a moment we can lose an opportunity to do better by our patient, or a student working with us.

Clinicians need current answers—at least for the fields that are changing fast, such as the diagnosis and treatment of emerging infections. Also, the information should be sorted by scientific strength, so that highly credible studies—for example, large randomized trials—stand out from weaker clinical research, good basic science that is not yet ready for clinical use, and simple opinions.

Nowadays, we can find the best available answers to clinical questions within seconds in a number of ways. Let me give you a few examples.

The textbooks on most physicians' shelves date back a long time, their contents unchanged since publication, though the evidence base for medicine has changed. A new generation of electronic textbooks is helping to overcome this problem; *Scientific American Medicine*, under the leadership of Daniel Federman '53 and David Dale '66, is updated regularly. Another e-text, called *UpToDate*, also by Harvard faculty, is a library of internal medicine and subspecialty texts, the equivalent of 40,000 printed pages.

With these new kinds of resources, readers not only stay fully current, but they can also experience the color, movements, and sounds of medicine. They can see variations on a heliotrope rash, watch a slapping gait, or hear a mid-systolic click.

A number of clinician-scholars throughout the world have organized themselves into working groups, collectively called the "Cochrane Collaboration," that gather the best information on the effectiveness of interventions. Members search all of the world's journals for randomized controlled trials and send summaries of studies that meet rigorous criteria to a central location in Oxford, England. There it is synthesized and made available to everyone, everywhere in the world, free of charge (at least for the abstracts) through the Internet.

Many of us find guidelines useful—not only the advice but also the critical reviews of the evidence standing behind recommendations. But how can you find the guidelines you want—and the others you don't even know about? Now all guidelines are listed on a single website: [www.guideline.org](http://www.guideline.org).

There are also one-stop websites for finding patient support groups, recommendations by the Centers for Disease Control and Prevention for international travel, current antibiotic resistance by infectious agent and region, and much more.



**CHAMPION OF TECHNOLOGY:** Robert Fletcher urges all physicians to keep pace with the flow of information available through electronic means.

Clinicians also need to keep up with new developments in their specialties. It might seem sufficient to read an excellent general journal or two, along with a few of the best journals in a particular specialty. But actually, the key articles in a field are much more widely spread out. An internist would have to review five journals to be familiar with half of the "can't miss" articles published in internal medicine each year and 14 journals to see 90 percent of those articles.

It would be impossible for us, acting as individuals, to do this, even with unusual dedication and effort. We need help. Fortunately, others are now doing the heavy lifting for us. For example, the ACP Journal Club selects, by explicit criteria, the most scientifically credible, clinically applicable articles from the world's literature, boiling 6 million articles per year down to about 200. A growing number of newsletters are providing similar services in various specialties.

In the past, our brains were black books (for facts such as differential diagnoses and drug doses) and packets of cards (one card for each ward patient). Now our students are finding ways to make a vast amount of information portable. My son, a medical student, has on his garden-variety PalmPilot (which holds the equivalent of about 3,000 pages of printed text) textbooks, course syllabi, drug databases, templates for write-ups, and much more. He views my own efforts at information management with a mixture of pity and amusement. He cannot understand why I don't find better and easier ways to cope, as he has.

Can we afford the time it takes to make these new information sources part of our lives? I think we cannot afford not to.

To illustrate, one night a colleague of mine was called about an abnormal prothrombin time, drawn that afternoon, on an elderly patient on warfarin. The prothrombin time was dangerously high. He decided that the patient should receive vitamin K by injection right away, but it was late and she wouldn't come in to the hospital to get it. He was about to send an ambulance when he thought, "I'll



just check that new textbook on my home computer." He learned of recent evidence that at the level of this woman's prothrombin time, it would be good practice to give oral vitamin K. A local pharmacy delivered the drug to the woman's home and she subsequently did well. He was able to give care that was safe and a lot simpler.

The information I am describing is available to patients too. Without much difficulty, patients can gather from the web more facts, good and bad, about their own diseases than their physicians are likely to have in their heads. That is good, in a way. But it does change the clinical relationship. It pushes us to find new ways to add value to the clinical encounter—for example, by interpreting evidence, putting it into context, and suggesting credible sources of information. We must be prepared to recommend good websites in place of the weak, self-serving, or promotional sites patients might have found on their own.

As we take up new habits in the information age, we must know exactly what we want to accomplish. We are seeking renewal, not just ways to get more done at the same breakneck speed. If we gain effectiveness and efficiency by wiser use of new information technologies, then use up the time saved trying to get that much more work done, we will be back where we started and just as much in need of renewal.

Harvard Medical School is, of course, very much on top of the information revolution. In typical fashion, HMS has not added new, how-to courses to its curriculum. What the School is doing—and this very vigorously—is creating an environment in which the best information is available by the most modern means. Then the School lets learning take its course.

A new, web-based resource, the eCommons, has been built as the electronic equivalent to the New England town commons—as a place where students and faculty can meet to exchange information. They are, after all, physically dispersed—in the Quadrangle, in the teaching hospitals in Boston and Cambridge, and in teaching practices in the community. The eCommons helps them keep up with each other.

On the eCommons is, among many other things, the Countway Library's extraordinary electronic collection of books and journals, as well as information from the Human Genome Project, which it shares with the HMS community everywhere through its digital library. The newly renovated Countway is a wonderful place to visit. But we need the resources of the Countway far more often than we can physically get to the library.

Through the eCommons, students and faculty are becoming familiar with information sources that are available not only at HMS, for those of us who remain at the mother school, but anywhere in the world, to anyone with access to a phone line or a satellite dish.

To get to the point where new sources of information do more good than harm, we must invest time to learn about the truly useful websites and devices. That would be a new habit for most of us. By investing, I mean being on the lookout for new possibilities, suggested by credible colleagues, and trying them out. Surfing the Internet or responding to for-profit promotions is not efficient.

Such investments of time can help you to be buoyed up by the rising tide of information—rather than washed away or submerged by it. Information management should be a vital part of a physician's overall plan for renewal. ■

*Robert H. Fletcher '66 is professor of ambulatory care and prevention at HMS.*



# THE WELL-ATTENDING

A physician-writer reflects on the curative powers of looking within to achieve

HIS IS WHAT HE TOLD ME: SOME TEN YEARS AGO, WITHIN A TWO-month period, he had lost his job, his wife, and his literary agent. He had arrived at a point in his life when, after 20 years in medicine, he felt burned out and ready for a change. Suddenly adrift, he became aimless, confused, unfocused. His agent, having learned of his first two losses, had dropped him like a wet diaper. Writing is a business, after all, and the agent knew, more than he did, what was to come. The man could no longer write, did not write for a year or more. Yet, somewhere in his consciousness he knew that writing was somehow key to his survival. What he had not learned was that medicine was also a part of his soul. He was clearly in need of physician renewal, although at the time he called it something else.

Staring at the blank page, unable to produce, still he did not miss medicine's unremitting demands. He did not miss being all things to all people, the final arbiter, the father confessor, the place where the buck would always stop, the captain of industry. Unfettered from these demands, he experienced a fresh feeling of freedom and believed he was well rid of her, Medicine.

In this time away from medicine, if he could not write, he could still read. And so he read. Through Emma Bovary, he saw the great error of a life bent on material acquisition. In Edmond Dantes, he tasted the bitterness of a life dedicated to revenge. And in Jean Valjean and Bishop Myriel he saw lives of integrity, dedicated to the Good Thing, and sensed there might be something there for him.

When he awoke from the fictive dream and returned to the light, he found there were bills to be paid, and a life still to be lived. Very well, he would use medicine, take any job

that came along, do anything required to support himself as a writer. This was, he told me, the "IMG phase" of his career, his period of servitude as a *locum tenens*, when he was assigned a desk in the nurses' lunchroom, treated with suspicion, believed to be hiding gin in the bottom drawer, used, ignored, marginalized. He lived this life as long as he could, feeling his anger build, feeling the writer's block grow. But he had not been trained to be a gatekeeper, had never learned to be a provider, could not treat patients as cattle, could not punch out at five o'clock.

He quit his job. And now he had a new wife who understood. "Good!" his wife said. "What took you so long?" He licked his wounds and read some more. Here is what his reading revealed to him: Honesty is fitting words to actions. Integrity is fitting actions to words. Our actions define us; not principles, not goals, not titles, not academic rank.

Approach each patient with this thought in mind: I will learn one new thing from this person. Study medical history. Find your place in it.

Cultivate your teachers. Have them teach you how to learn, not spoon-feed you. Cultivate your consultants. Do not abuse them. Send them the baffling case you cannot diagnose by your own wit. Do not, out of sheer laziness or crunch of time, send headaches to the neurologist, chest pain to the cardiologist, and arthritis to the rheumatologist.

Cultivate your students. Do not try to make them into your own image for purposes of self-affirmation. You will harm them in doing so. Bother to find out what they need and want to do, and what they are capable of. For students, as for children, quality time is all that is required.

Just as you cannot cure all disease, you cannot be a doctor to all patients. For your own peace of mind and for the



MICHAEL LACOMBE

// He knew that writing was key to his survival. What he



# PHYSICIAN

personal and professional balance

by MICHAEL A. LACOMBE

well-being of patients, you must learn to say "no," and "I am sorry but I cannot help you," and "I think it is time you saw someone else." These may be the most difficult words for physicians to say, reared as they are in a world that promises omnipotence and endless possibilities.

Communicate. Imagination is the great demon of marriages, partnerships, universities.

When in doubt, return to first principles. Take a history. Examine the patient. Talk to the family. Ask the nurse.

Simplify your life. Thoreau was right: material possessions will possess you. Acquire an object for its utility, not its appearance. Measure your worth not in objects, but in knowledge and in kindness to others.

Remember these things: Love work, despise officialdom, and do not make yourself known to those in political authority. And this: all that is required for evil to triumph is for good people to do nothing.

For God's sake, stop pitying yourself. You are not at the mercy of a despotic king. You are neither bound by class, nor diminished by poverty. You have great science as a tool, not leeches. The excellence of your pharmacy dwarfs arsenic, antimony, belladonna. Your citizenry in the richest, most advanced country in the history of the world is sheer good fortune. You do not live in Uganda. You enjoy more than an ox for transportation. Your children will almost certainly reach adulthood.

Stay in shape. This means more than mere diet and exercise. You need a diet of poetry and literature, and rigorous exercise in thinking and in spiritual contemplation.

Being a doctor requires quick reflexes. The occasion is instant. Hone your reflexes by a regular habit of exposure to patients, talking to them, touching them, taking a history, and doing a physical examination.

Learn how to listen. You cannot understand another, nor take a meaningful history, by talking.

Avoid arrogance. In the great panoply of human history, what have you to be proud of? We exist for each other. Teach others, care for them. Generosity, that's the key. When you begin to become overly proud, when you begin to strut and show, ask yourself this: With the tools available at the time, would you have been capable of the observation and description of Hippocrates, the precision and analysis of Sydenham, the auscultatory skill of Laennec?

Offered a job because they needed him, the physician writer took the position because it felt good to be needed again. But because of the sort of doctor he was, because of his excellence in training, soon he became all things to all people, the final arbiter, the father confessor, the place where the buck could always stop, the captain of industry. For a time it felt good. He had missed these things, missed the mantle of their importance. Soon he was working full time, then more than full time, still living a life unbalanced and therefore, for him, an unhappy one. Moreover, there was corruption at this job, the corruption of corporate medicine, of takeovers and payoffs. He had a choice. He could be a Dangles, keep his head down, remain on, and profit. Or be a Jean Valjean, speak out, and so place himself in jeopardy.

"I quit my job," he told his wife.

"Good!" she said. "What took you so long?"

He was beginning to learn what it was he wanted: a life in balance. A life of literature and writing. And of medicine. Not the medicine of the twenty-first century, but rather the medicine he had learned to love. And so, though a generalist, he passed himself off as a specialist. In the

had not learned was that medicine was also a part of his soul. //



process of becoming a specialist, on his own time, at night, and on the job, he had to learn new things. As a result his fulfillment grew. He remembered a passage he had read long ago:

"The best thing for being sad," replied Merlyn, beginning to puff and blow, "is to learn something. That is the only thing that never fails. You may grow old and trembling in your anatomies, you may lie awake at night listening to the disorder of your veins, you may miss your only love, you may see the world about you devastated by evil lunatics, or know your honor trampled in the sewers of baser minds. There is only one thing for it then—to learn. Learn why the world wags and what wags it. That is the only thing which the mind can never exhaust, never alienate, never be tortured by, never fear or distrust, and never dream of regretting. Learning is the thing for you. Look at what a lot of things there are to learn: pure science, the only purity there is. You can learn astronomy in a lifetime, natural history in three, literature in six. And then, after you have exhausted a milliard lifetimes in biology and medicine and theology and geography and history and economics—why, you can start to make a cartwheel out of the appropriate wood, or spend 50 years learning to begin to learn to beat your adversary at fencing. After that you can start again on mathematics, until it is time to learn to plough."

Resisting every form of enticement, financial and otherwise, he insisted upon this life in balance. Half of his time he would thrill to patients and the passing of catheters, wires, and lines, and with the other half, quicken at the magic of the written word. His wife, seeing him happy, was herself happy. He found he had to struggle with shifting gears, every week jumping from the left-brain world of medicine to the right-brain world of creativity. In this

**SOUL  
SURVIVOR:**  
Michael LaCombe  
touches on the dangers  
of not listening to your-  
self and the rewards  
of living a life in  
balance.

shifting of gears, he found that he possessed two souls, and the true secret of renewal, of staying power.

Thus began, he tells me now, his "working-mother phase," a time when he tolerates whispers of "He works only part time," and "He takes four days off every week." He also lives a life of not being all things to all people, a life where he is not the final arbiter, but relegates that role to someone else. He

is no longer father confessor, no longer the place where the buck always stops, no longer the captain of industry. When he finds himself missing these things, he reminds himself of their cost. And when he is asked by someone, in inflected condescension, what it is that he does with all that time off, he smiles and says, "I do research."

Still, he has moments, he tells me, when he wonders why he is here and what it is his life is really all about. At these times, he says, he compares himself to the poet watching mayflies, who writes:

*Watching those lifelong dancers of a day  
As night closed in, I felt myself alone  
In a life too much my own,  
More mortal in my separateness than they—  
Unless, I thought, I had been called to be  
Not fly or star  
But one whose task is joyfully to see  
How fair the fiats of the caller are. ■*

Michael A. LaCombe '68, a physician and writer, is director of cardiology at the Maine General Health Center in Augusta, Maine.

Merlyn quote excerpted from *The Once and Future King*, by T. H. White (reprint edition 1996), reproduced by permission of Putnam Penguin. All rights reserved.

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# DRAWING THE LINES

How should academic institutions manage conflicts of interest in biomedical research? | *by* JOSEPH B. MARTIN

A WALL BETWEEN ACADEMIA AND INDUSTRY HAS ARISEN over the past century. The academic mission is education and discovery driven by intellectual curiosity—what we in academia like to call “pure motives.” In industry, the mission is translational research, commercialization, and profit making.

Yet during the course of the century, a sequence of breaches in the wall separating these two cultures has developed. The first breach arose around technology, engineering, and computer science, which led to a deliberate process of issuing patents, licensing them, and earning royalties. Discovery occurred in university laboratories, which owned the patents, and development occurred under exclusive licensing arrangements in industry. Most major research universities engaged in the fundamental sciences followed this sequence.

During the past 50 years, with federal support for biomedical research growing at an incredible pace, we have watched the same process occur in the biological sciences. But new ethical issues have emerged. In addition to technology, in the biomedical sciences we are dealing with agents and devices that are put into people and are tested for efficacy and safety before being approved.

To facilitate this translational research, academic institutions have over the past two decades developed an understanding with their faculty, which I call the “20 percent rule.” We allow, and even encourage, our faculty to engage in outside activities for up to one day a week, activities for which

they can be remunerated by honoraria, consultant fees, stock options, and equity. They can start companies and be entrepreneurial, and we have come to admire those who have been very successful, including a number of our most illustrious faculty.

Another development expanding the breach in the wall has been the evolution of basic science support from industry to our academic laboratories. It began notably with the Monsanto deal at Washington University in the mid-1970s. Here at Harvard, a proposal from Monsanto in 1972 to support the work of Bert Vallee and Judah Folkman '57 resulted in a prolonged discussion about technology licensing and patents. Harvard relented and opened a patent office for the first time in 1977. Subsequently, the Hoechst arrangement with Massachusetts General Hospital was formulated in the early 1980s to support molecular



JOSEPH MARTIN

biology. MGH also now has a major deal with Shiseido, a Japanese cosmetics company, to support research in cutaneous biology. The Dana-Farber Cancer Institute has deals with Novartis. Across the country, we have watched controversial relationships at the Scripps Research Institute with Novartis, and most recently, the involvement of Novartis in plant genetics at the University of California at Berkeley. By and large, each of these relationships has been controversial in the beginning, but we have come to live with them.

In the last five years, yet another breach has occurred. We have recognized that our institu-

PHOTO: JAMES ELLIOTT

// Faculty can start companies and be entrepreneurial. //

tions do not actually make much money from royalties. Only a few institutions in the country earn more than \$15 to \$20 million a year through their technology transfer offices. So our academic institutions took action to accept equity in new companies as a way to enhance the economic value of their intellectual property. This followed the recognition that many start-up companies have become very wealthy, and that owning stock in them increases the chances of enhancing financial returns from the agreement. Most of our large fellow institutions—such as Columbia and Johns Hopkins—now also accept equity in start-up companies, as do Harvard and most of our affiliated hospitals in the Boston area.

During this time, opportunities in clinical research have grown enormously. The number of clinical trials has increased dramatically, as has the support from industry for clinical research. A good number of clinical research organizations, both for-profit and not-for-profit, have formed in the past five years. More Harvard faculty are now involved in clinical trials; we have watched the Institutional Review Board (IRB) workload increase. Ten years ago the promise of gene therapy led to aggressive clinical trials, which were complicated when investigators began introducing into people complex biological agents whose effects are unpredictable. As we saw with the tragic death of Jesse Gelsinger at the University of Pennsylvania, aberrant and unexpected immunologic events can rapidly result in death.

Breaches in the wall between industry and academia might be considered advantageous to us all for a number of reasons. Translational research has facilitated growth hormone therapy, advances in angioplasty, and technologies like fMRI. Interdisciplinary opportunities have been enhanced. Here at Harvard, for example, the new Institute of Chemistry and Cell Biology was supported with a \$5 million gift from Merck. It was a nonexclusive arrangement; Merck had no particular rights, but it believed that what we were doing was vital and therefore worthy of funding.

Discretionary money for academic programs also has been important for our institution and has funded professorships, fellowships, and scholarships. The acculturation between the academic and industrial communities has certainly been one benefit from these interactions over the years. But the increasing number of these new relationships and the challenge inherent in managing them has led us to stop and assess what we are doing and permitting.

We have heard about the “university for sale” (Marcia Angell) and “uneasy bedfellows” (David Weatherall). We have watched our leading institutions charged with inadequate compliance with informed consent; we have seen institutional review boards perceived as acting out of self-interest and not always asking the questions they should; we have witnessed the expansion of federal regulations and threats of fines for noncompliance. Other concerns about conflict of academic interests persist: the question of



**RULES KEEPER:**  
Joseph Martin believes that clear policies and full disclosure are crucial for avoiding conflicts of interest in medicine.

whether students are free to pursue their own research interests; publication delays and manuscript debates that result from research findings that do not come out the way a sponsoring company wanted; and the general worry about the loss of academic exchange in an environment in which this research is supported by for-profit entities.

About two years ago we were faced with the question of what Harvard Medical School's position would be on financial conflicts of interest. In 1991, the faculty had embraced a new set of guidelines, which permitted income of \$10,000 in consulting fees and ownership of up to \$20,000 equity in a publicly traded company, even when that company supported research in the investigator's laboratory.

Eugene Braunwald, vice president for academic programs at Partners HealthCare System, chaired a committee of the faculty that deliberated effectively and passionately over this issue for a period of about 18 months. The committee was split in its recommendations. The possibility of a majority report versus a minority report emerged when I recognized, with the death of Jesse Gelsinger, that we should hold to our rather strict guidelines and wait to see whether a national consensus would develop with respect to how we might proceed.

What has happened since then? The best data available on the nature of these issues appeared in several papers in *JAMA* and the *New England Journal of Medicine* last fall. These data showed widespread variability in guidelines, monitor-



ing, and faculty awareness of issues linked to actual or perceived conflicts of interest.

Dennis Kasper, HMS executive dean for academic programs, and I summarized our thoughts on this topic in the November 30, 2000 issue of the *New England Journal of Medicine*. We believe that the public deserves:

- to know that the research they support will be a search for truth uncontaminated even by a perception of bias;
- to see that discoveries with the potential to improve health are rapidly translated in practice to clinical trials;
- to feel confident that their participation in the development of new therapies will be safe, with full informed consent obtained at the outset and access to outcome data provided afterward—something that I think we rarely do in clinical trials; and
- to be assured that neither the decision to ask patients to participate in clinical trials nor the assessment of the risks that patients may incur will be prejudiced by an investigator's personal profit motives.



Last fall, we convened the leaders of about 20 of the top medical schools, both private and public, that are supported by the National Institutes of Health. We divided our recommendations into three general categories. The first category involves institutional policies. We encourage institutions to develop both widely understood disclosure policies for faculty and researchers, and a process for review and management of any issues that may arise from the disclosure. Every medical school research institution should have a written policy on financial interests related to research. The policy should include a statement of general principles and a clear delineation of the kinds of financial relationships that are and are not permissible, or that require review or approval.

Importantly, the policies should specifically address the special circumstances surrounding clinical research. Except under extraordinary circumstances, people directly

involved in the conduct, design, or reporting of research involving human subjects should not have more than the clearly defined minimal personal financial interest in the company that sponsored the research or owns the technology behind the study. The majority of the group wanted this to be a "zero" rule; in other words, no financial interest in the research or technology would be permissible in clinical trials. A minority preferred to leave this up to the individual institution.

The second category is the disclosure of financial interests. We believe that all faculty, trainees, students, and staff who participate in research should be required periodically and prospectively to disclose related financial interests. Faculty, trainees, students, and staff who participate in clinical research should disclose financial interests to institutional review boards. Each IRB should have responsibility for ensuring that patients are informed of such relationships as the IRB deems appropriate. Finally, faculty, trainees, students, and staff should disclose all related financial interests in any publications or oral presentations.

The third category of recommendations concerns implementation and review. Disclosure should be made on multiple levels within each institution, not only to the department chairs, but also to the dean, chief executive officer, or equivalent individual who has ultimate responsibility for monitoring the activities of faculty, staff, and students. The group strongly believed that simply reporting to the division head or the department chair would not suffice; the departments in many cases have much to gain from activities that might concern the institution itself. The group recommended that each institution have an advisory oversight committee that brings together faculty, administrative staff, and representatives from the community at large. This committee should be charged with providing oversight, reviewing all of the difficult cases, and establishing monitoring procedures for exceptional cases when appropriate.

Collaboration between our academic institutions and the industrial world is essential. The public benefits from this collaboration. The drugs and devices that we take for granted and are thankful for have been the result of the relationship between the academic and industrial communities. Faculty members are often energized by collaboration and become more entrepreneurial and productive as a result. The public will, however, lose trust in our institutions if we fail to monitor these collaborations.

The benefit of these relationships is that they facilitate what we are all here to do in the end, to find treatments for the ills that afflict humankind. As we define it in our mission statement for Harvard Medical School: "To create and nurture a community of the best people committed to leadership in alleviating human suffering caused by disease." The unfortunate part is that real or perceived conflict of interest, personal or institutional gain, and personal enrichment and fame may contaminate the search for and discovery of *veritas*. ■

Joseph B. Martin, MD, is dean of Harvard Medical School.

# TALKING ABOUT A

Members of the Class of 1976 celebrate and lament how technology

LUMNI WERE TREATED TO AN UNVARNISHED ACCOUNT OF their four years at HMS at the Class of 1976 Symposium. "We came. We sat. We listened. We were tested. We passed," said Maria Savoia, professor of medicine at the University of California, San Diego School of Medicine. "We went to the wards. We saw patients. We turned in reports. We matched. We left."

The lives of many graduates have become more exciting—and even turbulent—in the intervening 25 years, judging by the majority of presentations at the symposium. Casting but a brief look at their shared past, speakers launched into up-to-the-minute reports from a wide variety of medical fronts. There was a sense of urgency as they described how unprecedented changes in technology are transforming their profession. From classroom to clinic, the world of medicine has become a much more complex, challenging, and chaotic place than it was when they received their medical diplomas.

## The Anatomy of a Revolution

"Many people who come back for their 25th reunion could say there has been a revolution in medicine," said opening moderator Joseph Bonventre, the Robert H. Ebert Professor of Medicine at HMS. As the first set of speakers made clear, new technology—especially the methods of molecular biology—has redefined the nature of disease and treatment. "Cancer therapy is being guided more and more by the genetics of the cancer cell," said Ilan Kirsch, chair of the genetics department at the National Cancer Institute.

Other areas of research, such as xenotransplantation, are benefiting from the molecular revolution.

Hugh Auchincloss, Jr., professor of surgery at HMS, described how cells from genetically modified animals are being transplanted into humans with diabetes, stroke, and Parkinson's disease in early clinical trials. Transplanting whole organs has been less successful so far due to problems with rejection, he said.

The explosion in molecular biology is leading not only to new therapies for patients, but also to new challenges for medical students and physicians, said Phyllis Gardner, senior associate dean for education and student affairs at Stanford University School of Medicine. "We're facing a tsunami of information, and it has all come about because of the digital revolution," she said. To stem the tide, new digitally based learning tools are being developed that integrate information. Simulation-based computer programs are teaching skills such as interviewing patients, introducing a catheter, and preparing for surgery.

**THE FUTURE IS NOW:**  
"Twenty-five years ago could we have predicted where we are today?" asks Deborah German.  
"My answer is no."

Medical costs are also being cut with the aid of computers, said Deborah German, senior associate dean for medical education at Vanderbilt University School of Medicine. She described a computer-based drug ordering program implemented at her hospital that shows how much a particular drug costs and what other drugs are available. The program has saved her hospital \$6 million.

Yet technology—particularly the use of computers to monitor physician productivity—is making life more difficult for many physicians, added Hope Druckman, a physician at Virginia Mason Medical Center in Seattle. "I must say that most days I feel like Lucy in the chocolate factory," she said, referring to a classic episode of the television show "I Love Lucy" in which chaos

// We're facing a tsunami of information, and it has all



# REVOLUTION

has transformed the world of medicine

by MISIA LANDAU

erupts as Lucy and Ethel try to decorate bits of candy whizzing by on a conveyor belt. "We're doing 17.5-minute visits with our patients, but instead of 20 visits like we used to do, we're doing 30," she said. "I think we're really in a crisis in primary care."

## The Politics of Illness

Taking a more global view, David Cohen, a former director at the Office of AIDS Research at the National

Institutes of Health, described how the AIDS crisis is threatening the balance of world health. "Twenty-two million individuals have died from HIV so far," he said. Most of these deaths occurred in sub-Saharan Africa and South and Southeast Asia. Cohen called on the government to take a greater leadership role in developing a vaccine against the scourge, just as it did in the 1950s to control polio.

The AIDS epidemic is just one of many threats to world health, and by implication, the health of this country, said Nils Daulaire, president and chief executive officer of the Global Health Council. "We all now paddle in a single microbial sea," he said. The resurgence of tuberculosis and other infectious diseases affects not just our health, but also our national security, he added.

Take southern Africa as an example. Fifty percent of all adults in the region could die of AIDS, Daulaire said, leaving a generation without adult supervision. Countries would be forced to recruit ever younger soldiers. "Imagine a continent with 40 million child soldiers," he said. Given current birth rates, 80 percent of the world's adults will have grown up in developing countries by 2050. Thirty percent of these will have been malnourished and could suffer from cognitive disabilities.

Many people say that addressing problems such as these is a hopeless task, Daulaire continued. But, in fact, improvements in medical technology are making the task doable. "Everybody here has a very important role to play," he added. "It's the fundamental reason we became physicians in the first place." ■

*Misia Landau is senior science writer for Focus.*



come about because of the digital revolution. //



Photo by [illegible]



1941



**Alfred Pope '41** The 60th (and last) formal reunion of the Class of 1941 took place during Alumni Week. Eleven of the 50 or so surviving members of the class attended all or part of the reunion events.

Class members and guests convened on Friday morning for the Alumni Day symposium, in which Dean Joseph Martin provided a comprehensive review of impressive expansions in both HMS academic programs and physical facilities. After lunch, we had opportunities to attend a symposium on the HMS-MIT teaching program and to participate in guided tours of the recently renovated Countway Library of Medicine.

The Class of 1941 members and their guests reconvened Friday evening for dinner in the Benjamin Waterhouse Room in Gordon Hall. We were privileged to be addressed by classmate Carl Taylor, emeritus (but still active) professor of international health at Johns Hopkins University and widely known contributor to improved public health and medical practice throughout the developing world. Carl spoke to us about his efforts in Nepal, accompanied by a series of superb slides of that country's beautiful landscapes and interesting people. It was a fascinating and moving ending for the day, and we are all proud to have Carl as a classmate.

A contrasting, but also gracious and rewarding, final reunion event was an elegant private reception and luncheon at The Country Club in Chestnut Hill on Saturday. This provided an opportunity for camaraderie, reminiscing, and sharing of experiences, as well as uninhibited discussion of the state of medicine and the world. We parted with a seemingly unanimous feeling that the reunion had been quite special and a most informative, enjoyable, and heart warming occasion. We all regret the loss of so many of our classmates and the inability of many others to attend our final reunion. Finally, we are grateful to all those at HMS who organized the reunion, particularly Jean Hurd, who played a crucial role. ■



# 1946

**George S. Richardson '46** As always, it was a pleasure to chat with old friends and their spouses in the perfect weather that Harvard commencements boast about but don't always deliver. Our class picture shows 27 classmates and 13 spouses, but peak attendance at our observances was 56, including two widows and some daughters and sons. Attendance built up as time went on, from the Thursday reception at Vanderbilt Hall to the Friday dinner at The Country Club and the Saturday clam-bake at the Richardsons' home.

In the Quadrangle, a highlight was the tour of the newly redesigned Countway Library of Medicine, whose lowliest innards have been replaced by magnificent rooms dedicated to discoverers and teachers we have known and loved. Computer teaching and computer capability were on display and were impressive. It was amusing, too, as HMS '46ers bumped into each other unexpectedly, passing on separate tours.

At The Country Club, attendees were challenged to perform as after-dinner speakers and the response that built up was, as one of us put it, "Magical!" Milton Hamolsky enabled us to relive our years when close-order drill filled what is now the grassy roof of the Quadrangle parking building, and the most serious—and ineffectual—order from our commander was to "Leave my WAC alone! In the first place, she's a woman, and in the second place, she (a sergeant) ranks hell out of all of you."

The evening was not all lighter-than-air, of course—appropriately enough, analyst Art Ourieff, always listening with the third ear, reminded us of the sadness and loss that goes with our years.

Temptation came my way when, for a time, Don Thomas's jacket was left behind with its unobtrusive Nobel Prize button in place. What an opportunity to swagger around for a bit among the ignorant! Oh, well. Even some of us elderly succumb to what Art Ourieff might call "infantile fantasies." ■



# 1951

**Gerald Foster '51** Jean Dawson, quoting Dorothy Murphy, wrote in our year book in 1951 that we were "the biggest bunch of characters ever to arrive here." Well, 50 of these characters, along with an assortment of spouses, friends, and family members, came to this special 50th reunion.

Distant travelers included Woodbury (Puerto Rico); Bikoff, Haynes, Karlen, McDuffie, Norris, Olson, and Peebles (Florida); Chapman, Dreyfus, Fahey, and Gordon (California); Dawson-Ross (Louisiana); Tuttle (Georgia); Fernald and Tctirick (Ohio); Richardson (Virginia); Zukoski (Arizona); Danforth (Missouri); Toll (Colorado); Lohnes (South Carolina); Frothingham (North Carolina); and Kleaveland, Skinner, and Mari Wingate (Washington). Since the reunion, we learned of the death of Henry Wheeler on October 12. Henry was a lively participant at our reunion and he will be missed. Our thoughts and condolences go out to Isabel and the family.

We were pleased that Selma Damon, Pat Geschwind, Joan Galdston, and Joan Oates joined us for some of the festivities.

Ruth and Jerry Foster hosted a reception and dinner at their home in Belmont on Thursday. We were honored to have Deans Martin and Federman join us at that time. Alumni Day had an interesting

program, and Tor Richter and Bill Danforth, who did a terrific job chairing the Reunion Gift Committee, presented to the dean a check establishing the Class of 1951 Scholarship Fund.

Friday evening we took over the main dining room of Maison Robert, with cocktails outside and an elegant dinner. We were treated to Ned Dreyfus's recording of "The Chancere Laden Maiden" and "The Girl with Von Recklinghausen's Disease," and learned the true story about Murray Strober and the "ciliary ganglion caper" inflicted on Vince DiRaimondo. Mostly we enjoyed each other's company in a wonderfully relaxed setting. Saturday afternoon found us sailing around Boston Harbor aboard the *Seaport Belle* and enjoying a lobster and clam bake. We were blessed with perfect weather, fond memories, and an opportunity to reconnect with classmates and friends.

Many thanks to the locals (especially my wife, Ruth) for orchestrating a marvelous reunion. And a special thanks to Clem Hiebert for making buttons out of our graduation pictures. How young we looked when we started this exciting career. As a matter of fact, we still look pretty good. And we can be proud of our contributions over the past 50 years in patient care, scientific research, and medical education. ■





# 1956

**Richard O'Hara '56** Members of the Class of 1956 thoroughly enjoyed our 45th reunion—a marvelous opportunity to renew old friendships and enjoy each other's company.

Approximately 93 people attended our class dinner at the St. Botolph Club, and it was a great success. One member of the class, Paul Altrocchi, gave a brief address on his new book, *Most Greatly Lived: A Biographical Novel of Edward de Vere, Seventeenth Earl of Oxford, Whose Pen Name Was William Shakespeare*—not William Shaksper of Stratford, Altrocchi contends.

The next day we adjourned to the Mount Washington Hotel in Bretton Woods, New Hampshire, for two days of pure fun, food, and enjoyment. It was an unmitigated success.

Plans are in place for our 50th, and all have promised to be there! A musical parody of some sort is in the planning stages.

We wholeheartedly enjoyed the 45th and strongly urge all reunion classes to make the effort necessary to enjoy the opportunity that these reunions present.

Our fondest memories of HMS are inexorably intertwined with the lasting friendships made there. ■







# '61

**Clarence (Ren) Zimmerman '61** On a balmy spring evening, June 7, nearly 80 members of the Class of 1961 (including spouses and a smattering of significant others), convened at my Brookline home to start the 40th reunion weekend. I was not there. Absented by an unforeseen and unavoidable conflict with my daughter's high school graduation, I left the whole thing in the lap of my wife, Peg, and the rarely seen John Dowling. From what I learned later, they did a marvelous job. John and his wife, Judy, have just retired as co masters of Harvard's Leverett House, so were used to unruly mobs and crowd-control issues.

A somewhat smaller but no less enthusiastic contingent made up my first viewing of the class during the Reunion Week seminars and speeches on Friday. At one point, proper note was made of the extraordinary generosity of Yeu-Tsu Margaret Lee. A vignette about her gift appears on the inside back cover of the spring issue of the *Harvard Medical Alumni Bulletin*.

By evening, New England's fickle weather continued to smile upon a delightfully packed cocktails-and-dinner party at The Country Club. The irrepressible Peter Liebert photographed everyone, Peter Randolph and Bob Leinbach serenaded us after dinner from the piano, and Ron Grimm, who organized the spectacularly successful 40th Reunion Fund, regaled us with tales of New Guinea, flashing that peculiar surgical sensibility that permits one to speak of body parts while sipping a demitasse.

On Sunday, we closed the weekend with a buffet at MIT's lovely country estate, Endicott House. The reunion co-chairs, Buck Frederick and Tenley Albright, both spoke, and both deserve the thanks of their classmates for their efforts. But the really fun stuff about the reunion won't make it into print—the one-on-one renewal of old friendships, the rememberings of four shared years in the crucible of Harvard Medical School, and the reaffirmation of a simple fact: We are a great class! ■



# 1966

**Jay H. Kaufman '66** The great HMS Class of 1966 celebrated its 35th reunion at the Ocean Edge Resort in Brewster, Massachusetts. The weekend began Thursday evening, as usual, with a cocktail party at the home of Jenzie and Bill Shipley in Chestnut Hill. The next day we were able to hear two of our own, Charlie Hatem and Bob Fletcher, talk about physician renewal to the assembled alumni. Friday, we gathered at the Ocean Edge Resort and, as per our tradition, each member of the class, and some of the spouses, spoke of how the past five years had gone, and what they planned for the future. Among them, David Gilmour spoke of his retirement and his career afterward, and Paul Torop talked of the mental health carve-out that he had created. Joel Friedman was, as usual, indefatigably upbeat about the future of medicine.

Bob Owen, class photographer, brought his album of recent and past pictures, and Tom Gettelfinger distributed news summaries to bring us up to date on the events of 1962-66, which we had missed 35 years ago. During the day on

Saturday, the class biked, ran, and played lots of tennis. Distinguishing themselves at the latter sport were Scott Nelson, Richard Hannah, Carol and Joel Friedman, and the Shipleys. One lonely classmate even golfed. Jack Schott was the athletic star, instructing many of his classmates on the fine art of competitive croquet. Bruce Cutler and Larry Beck, both of whom were all-American swimmers in college, swam to Provincetown and back.

On Saturday night, our ranks swelled by classmates who could not make it the first night, we had a great clambake at the hotel. Bob Binder represented our dental classmates, and Carol (Mrs. Bob) Greenes even sang a few bars from our Second Year Show. After dinner, Father Ned Cassem was seen watching the Stanley Cup finals and offering supportive comments for the Avalanche in the highly moral way that we all remember. By Sunday morning, the tired group gathered for a last breakfast together, and began to plan for our 40th reunion. The class spouses, however, vetoed George Hardman's suggestion that this take place in Iceland. ■



# 1971

**Alexandra Harrison '71** The first event of the 30th reunion of the Class of 1971 was dinner at the Harvard Faculty Club. It was such a pleasure to greet old friends. The Faculty Club is more elegant than it was in our days, and the food was excellent. It was hard to stop talking and eat, though, since we all had so much catching up to do.

Mark Goldman distributed the results of the confidential questionnaire, offering a fascinating picture of the class. Among the most interesting facts: 57 percent of the respondents live in the suburbs; 71 percent have been married once, most for about 25 years; 75 percent are in excellent health; most respondents are roughly the same weight as they were in med school; most are both professionally and personally happy; more than half consider themselves politically liberal; two thirds of the respondents would go into medicine again; and only one-third are encouraging their children to go into medicine. Times have changed.

It was sad to mark the death of our classmates Phil Compeau, John Mantos, and Gene McDonald. On a humorous note, one of the people listed as deceased wrote back to Mark. George Feldman wrote: "Dear Mark, Not to nit-pick, but technically I'm not dead—just residing in New Jersey. Warmly, George." The error was corrected by notification to all classmates.

Saturday we were lucky enough to repeat an old tradition of a clambake at the Donaldsons' in Lincoln. Sixty three members of the class and family members enjoyed Craig and Jennifer's extraordinary hospitality. It was a hot day, and a tent was set up on the rolling green lawn of the backyard. We continued our conversations from the night before, sitting on the grass or in the shade of the tent. Jim Goodwin told a story of HMS roommates putting innocent lobsters into a pot of cold water and turning on the heat. Joel Greenberger played us beautiful jazz on his trumpet. Dennis Landis brought slides

of our Class Day and class picnics so that we could recognize the truthfulness of our answers to the questionnaire. We all look the same, minus a little hair or color in the hair.

The success of the 30th reunion of the Class of 1971 was due in large part to the Reunion Committee—especially Co-Chair Ann Stark, Treasurer Frank Berson, and Secretary Mark Goldman, and all the committee members: Bob Beart, Craig Donaldson, Harvey Fineberg, Skip Fuller, Fred Jones, Cindy and Bill Kettyle, Stu Orkin, Jeremy Ruskin, and Joel Schwartz. Special thanks also to all the people in the Alumni Office for their generous assistance from the beginning of the planning to the happy ending.

It was hard to say goodbye after just reconnecting. We all resolved to keep in touch and not wait for five years. We missed those of you who didn't make it this time. Please come to our 35th. ■



# 1976

**Hans T. Aretz '76** About 75 members of the Class of 1976 gathered during the two days of our 25th reunion. "Twenty-five years! How time flies!" was an often-heard refrain. Well over 100 classmates had submitted entries and pictures for the reunion book, which made for quite interesting, moving, and often inspiring reading. Many thanks again to everybody who contributed to this effort—it provided memorable snapshots of the lives of a diverse group of people who, despite professional and personal adversities and setbacks, still seem to share one thing: a love, or at least respect, for the field of medicine. Thursday's symposium, given by members of the class, provided a glimpse into some of our varied interests and career paths. Many thanks for the special efforts of the speakers.

The symposium began with scientific presentations covering subjects ranging from the genetics of cancer to invasive radiology, followed by talks on

medical education, since several members of the class hold leadership positions in this field. The afternoon began with a global perspective on medicine covering such subjects as the devastating global AIDS crisis, the pathogenesis of epidemics, and global health as a national security problem.

The remainder of the day was reserved for more personal topics, allowing a glimpse into some of the challenges of a physician's life: being a woman physician and bringing up children; trying to maintain hope in the face of personal loss; and struggling to serve your patients in a system that seems to be designed to defeat those efforts. In addition, some very practical and humorous advice was offered for the physician as traveler. Overall, most of us seem happy—maybe happier than we were 25 years ago. A. Stone Friedberg, reflecting on 60 years at HMS, added his perspective as he concluded a very successful day.

Thursday evening was taken up by a reception and dinner in the atrium of the Tosteson Medical Education Center (nonexistent in our days). Daniel Federman '53 was kind enough to join us and address the class, and Marvin Bittner added yet another chapter to "The Warning Signs."

On Friday night, a reception and dinner at the Bay Tower Room concluded the official program. Dale Blackstock's husband and daughters (HMS '04 and '05) joined us. Dale is one of five classmates who have passed away. After dinner the class exchanged information, for the most part factual, about those classmates who were not able to come to the reunion. We hope you won't miss the next one in five years, so you can tell us what you're really doing! Finally, many thanks to Jean Hurd and Nora Nercessian in the Alumni Office for all their work. ■







1981

**Michael C. Payne '81** In the 20 years since our graduation, the Class of 1981 has changed in outward appearance, professional direction, and areas of interest. Yet during that time, the drive, the determination, and the personae of our classmates have not varied all that much from the days when we sat in lectures together in Building A.

In both the Alumni Day activities and the social activities that followed, we all had the opportunity to reunite ties—to the institution, to our own personal life histories, and to those people we called friends so many years ago.

Forty-three people attended the Bay Tower Room dinner. Classmates and their significant others came together to dine, to talk, and to reminisce. Despite the 20 intervening years, we as a group have not changed substantially from when we first met each other. I was impressed that, in spite of the pressures

of time, work, and family, the brilliant personalities that I knew 20 years ago still give our class the unique strength and insight that it has to this day.

The luncheon at Manuel Lowenhaupt's house confirmed that impression. The 54 adults and 25 children who attended amply demonstrated that we have interests outside of our careers. It was fun watching our families interact. There was a rightness about the afternoon that suggested that perhaps our particular cohort was doing better than could have been expected.

Between the lobster and the roast chicken and a beautiful New England day, I would declare the 20th reunion of the Class of 1981 a rousing success. We had an opportunity to share life stories and to teach each other once again that, despite distance and time, we are still members of an exceptional group of people. ■

# 1986



**Mark S. Hughes '86** The 15th reunion of the Class of 1986 was a great success, and the 15th reunion book was filled with interesting information about our increasingly busy lives.

On Friday evening, we had a fabulous social hour and dinner at the Harvard Club with more than 25 of us attending. Classmates from Atlanta, Virginia, Illinois, New York, Maryland, Washington, DC, and the Greater Boston area enjoyed the meal and company. We did have a few sobering moments, though, when we compared cholesterol levels and discussed which statins we were taking.

On Saturday, Mark and Kim Girard hosted an extraordinary picnic at their beautiful home in Marblehead. More than 30 adults and 30 children attended the lobster feast, and the weather cooperated beautifully. Mark and Kim get special credit for renting a "Moon Bounce" and having a shovel and bucket for each child to play with on the rocky beach. Many classmates toured Marblehead after the picnic and had a most enjoyable evening.

We look forward to the 20th reunion and better lipid levels! ■

# 1991

**Mary Barton '91** On the whole we feel that we all look just the same. Well, close. In any case, the Class of 1991 had a spectacular tenth reunion, and lots to smile about—and, of course, all of us look younger when we're smiling.

Having traveled from near and far to Boston, the assembled members of the Class of 1991, along with their spouses, significant others, and guests, commenced the revelries with dinner at The Elephant Walk on Friday night. We enjoyed Cambodian cuisine and the hum of ceiling fans as we shared with one another our tales of success and woe in office practice, hospital attending, and child care, and reported news of other class members who could not be there. Forty-three of us attended. After dinner we paused in remembrance of three class members who are no longer with us: Bemy Jelin, Reza Gandjei, and Dave Godley. Beth Biegelsen reminded us to cherish the days that we have.

On Saturday, under glorious skies, we communed with nature at a picnic

at Larz Anderson Park. More than 50 adults and several gaggles of children came together to eat barbecue and corn on the cob, and to listen for the bells of the ice cream truck in the parking lot. We were entertained by the antics of the younger set. While we in the class are pretty closely grouped in age, our children range from the young adult (Beth Rider's children) to the precocious pre-adolescent (Chris Peckins and Susan Abookire's daughter Sylvie) to a number of wee infants such as those arriving with Jonathan Bogan, Gaby Otterman, Monika Woods, and myself. Traveling from the left coast for the reunion, Peter Sokolove and Sally Holtzman modeled relaxation for the assemblage—even the New Englanders got the hang of it.

A bow of thanks to the Reunion Committee: Zoher Ghogawala, Bill Hahn, Sara Bolton, Reisa Sperling, and Beth Biegelsen, and our indefatigable comrade in the Alumni Office, Jean Hurd, for laying the groundwork for such a successful reunion. ■



# 1996

**Jeffrey Schnipper '96** A small but enthusiastic crowd showed up for the fifth year reunion weekend. Most of the folks were from the Boston area, but a few managed to come all the way from Philly, South Carolina, Michigan, and even California.

The festivities started Friday night at the Brown Sugar Café on Commonwealth Avenue, where we had excellent Thai food (with lots of appetizers!). Participants included Melinda Fan; Ann (Bramlage) Heerens and her husband, Hans; Deborah Hoffer and her husband, David; Rajani LaRocca and her husband, Lou; Jeff Schnipper and his wife, Allison; Larry Sanders (who had to run off early to get ready for the radiology boards that weekend); Antonia (Apple) Stephen; and Marcia Zuckerman. Ann's son Mark, five months old, was at Raj's house with Raj's son Joseph (oh yeah, and a babysitter, too).

Saturday night we regrouped for cocktails and an elegant dinner at the Bay Tower Room in downtown Boston. New faces included Michelle Barr and her husband, Brian O'Connor; Larry Bloch; Dave Brown; Lis Hagen; Pam Hom; Elbert Huang and his fiancée,

Tina Louie; and Dave Muñoz and his wife, Cynthia.

On Sunday, we had perfect weather for a mellow picnic at Larz Anderson Park. Helping to make a dent in the pulled pork and watermelon were Ivana Kim and her husband, Bill Han; Yngvild Olsen, Josh Sharfstein, and their son, Sam; Christoph Westphal; and a few folks from earlier events (this time, Michelle brought her mom). Making up for their tardiness with their arrival were Tom Gaziano, his wife, Andrea Reilly, and their newborn (really newborn) son, Dominick.

The various events gave everyone a chance to catch up, reminisce about the good old days in the MEC, and spread vicious rumors about those who weren't there (just kidding). It was also nice to see our classmates finding the time to have real lives and to sample the varied paths our careers have taken since med school (including several classmates practicing medicine outside of the ivory tower and the occasional businessperson or two). We also vowed to keep in touch and to do a better job of rounding everybody up for the tenth. I hope that, by then, we won't all still be in residency. ■



**Robert J. White**  
**1953** dedicated an exhibit titled "The Universe in the Head" at the Stiftung Deutsches Hygiene-Museum in Dresden, Germany, in the fall of 2000. A portion of White's neuroscientific laboratory had been re-created within the exhibit. In April 2001, White was invited to return to Germany, where the exhibit was being shown at the Landesmuseum für Technik und Arbeit in Mannheim. While he was in Mannheim, a book titled *Meinen Kopf auf deinen Hals*, which deals with his work and concepts in neuroscience, had its debut.

**Arthur S. McFee**  
**1957** "I retired as professor and chief of general surgery on August 31, 2001, after 34 years at the University of Texas Health Science Center at San Antonio, and six years as chief. It has been a fascinating three-decade experience participating in the development of a new medical school from its inception. I became professor emeritus upon retirement. On a lighter note, Elizabeth and Richard Wagman spent five days with us in July at our home in Santa Fe, New Mexico, to sample some opera, some things Southwestern, and some things Native American."

**Lucian Leape**  
**1959** was made an honorary fellow of the Royal College of Physicians and Surgeons of Canada for his efforts to advance patient safety and prevent iatrogenic injury. Leape is adjunct professor of health policy at the Harvard School of Public Health.

**Irwin Rosenberg** joined Tufts University's most distinguished faculty in October, when he was named University Professor. This honor has been awarded to only three other Tufts faculty members before him. Rosenberg is dean of Tufts University's School of Nutrition Science and Policy and the Jean Mayer Professor of Nutrition. He served as director of the Jean Mayer U.S. Department of Agriculture Human Nutrition Research Center on Aging for 15 years.

**Irene Fox Brigglin**  
**1963** "During our recent visit to Bangkok, the events of September 11 occurred. My husband and I were extremely grateful that Peck and Yong Uahwatanasakul lived there and were of enormous support to us for the week that elapsed before we could return to the States. They invited us to their lovely home, took us out for dinners, and drove us to interesting sites in Bangkok, all of which were welcome distractions from watching replays of the collapsing towers on CNN. Yong's generosity is also reflected in his continued practice of medicine, which

is largely pro bono. We had some interesting discussions comparing the state of medicine in Thailand to that in the U.S. Peck's warmth and graciousness were expressed in so many ways, including taking us on a wonderful day trip while Yong worked. Yong has asked me to encourage any member of the class who is in his part of the world to visit him. If you do, you are in for a warm welcome and a most interesting experience."

**Lorin M. Koran**  
**1966** was given the Excellence in Teaching award by the 2001 graduating class of psychiatric residents at Stanford University Medical Center, where he is professor of psychiatry. In addition, his book *Obsessive-Compulsive and Related Disorders in Adults: A Comprehensive Clinical Guide*, has entered its third printing.

**W. Reid Pitts, Jr.**  
**1967** "I know of no casualties from the World Trade Center attack who attended HMS. Unfortunately there were very few casualties that we could treat, as over 95 percent of the people in the towers at the time of the collapse died. On a brighter note, with the encouragement of my family (Marguerite, Will, and Bradley) and one HMS classmate, I have been off all alcohol for ten months. I feel great! It is amazing how well you feel when you stop hitting your head with a hammer. Bradley (MIT '00) is back at school for a master's in astro-engineering before going on to architecture school to be a residential architect with a subspecialty in architecture







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